

Addis Ababa
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Addis Ababa University
College of Law and Governance Studies
School of Law

LL.M in Business Law

**Regulation of Electronic Banking in Ethiopia: The Analysis of Legal
Framework**

By: Bikila Ababu

June, 2019

Addis Ababa, Ethiopia

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By: Bikila Ababu

Advisor: Solomon Abay (PhD, Associate Professor of Law)

**A Thesis Submitted in the partial fulfillment for the awards of Masters
Degree of Law (LL.M) in Business Law at the College of Law and Governance
studies, School of Law, Addis Ababa University**

June, 2019

Addis Ababa, Ethiopia

Approval Sheet

Regulation of Electronic Banking in Ethiopia: The Analysis of Legal Framework

By: Bikila Ababu

Approved By Board of Examiners

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Advisor	Signature	Date

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Examiner	Signature	Date

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Examiner	Signature	Date

Declaration

The thesis titled “Regulation of Electronic Banking in Ethiopia: The Analysis of Legal Framework” is my original work and has not been submitted for an award of degree at any other University and all materials used in the course of writing this research work have been duly acknowledged.

Declared by:

Bikila Ababu

Signature _____

Date _____

Confirmed by:

Solomon Abay (PhD, Associate professor of Law)

Signature _____

Date _____

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Abstract

The rapid development of technology has greatly affected the fate of human life including the financial sector. In the banking context the technological advancement has changed how banking products and services are delivered, the point of contact of the customers with the banking service providers, and the structure of market actors. E-banking i.e. the delivery of banking products and services through electronic channels offers ample opportunities to the customers, the banking organizations and the overall economy. Not only does they present opportunities to the parties involved e-banking system also pose a number of risks. Hence, in order to harness the benefits the e-banking systems offers the possible risks attached with it have to be clearly identified and managed. The financial regulators main duty in this regards is to balance the need for expansion innovation against the possible risks that may emanate from the innovations. The e-banking system in Ethiopia is at nascent stage but with enabling regulation and active participations of all the stakeholders there is a prospect for its growth. The Ethiopian government has undertaken different initiatives to effectively regulate the e-banking initiatives. This research work has analyzed the e-banking regulatory structure in Ethiopia governing all e-banking platforms commonly and recommends the need to reform the sector further. There is a need to further strengthen the regulatory framework in the areas of e-banking security, contractual enforcement, consumer protection, market competition, and supervision of the third party service providers by further reforming the legal set-up and institution arrangement. The Ethiopian government has to introduce further reforms to better build the capacity of the telecommunications sector, introduce tailored laws to better protect the rights of financial services consumer including e-banking services and set up proper institutional structure to regulate and supervise it. The financial regulator NBE shall take the leading role in facilitating the expansion and growth of e-banking system in the country. It shall provide the necessary guidance specially in ensuring the security of the e-banking system and work in tandem with the concerned organs, and enhance its regulatory capacity from time to time including the utilization of technology to effectively and efficiently undertake its regulatory function.

Key word: banking service, Ethiopia, E-banking, electronic, reform, regulation, technology

Lists of Acronyms and Abbreviations

ATM- Automated Teller Machine

CBE- Commercial Bank of Ethiopia

DFS- Digital Financial Services i.e. the utilization of mobile electronic devices to deliver financial services

E-banking- the utilization of electronic channels to deliver banking products and services

E-commerce- the utilization of electronic communication to form a contract

E-money- the stored value of money used to effect payment

EFT- Electronic Fund Transfer

Fintech- startup companies that apply technology to financial services

GFC- Global Financial Crisis

ICT- Information Communication Technology

IT-Information Technology

KYC- Know Your Customer

M-banking- the utilization of mobile device to deliver banking products and services

MICT-Ministry of Communication and Information Technology

NBE- National Bank of Ethiopia

NPSP- National Payment System Proclamation

OECD- Organization for Economic Cooperation and Development

PC- Personal Computer

PDA- Personal Digital Assistance

PIN- Personal Identification Number

POS- Points of Sell Transfer Terminals

TCCPP- Trade Competition and Consumer Protection Proclamation

WWW- World Wide Web

Chapter One

Introduction

1.1. Background of the Study

Technology is making tremendous impact upon the service companies including the financial sector. The application of information and communication technology concepts, techniques, policies and implementation strategies to banking services has become a subject of fundamental importance and concerns to all banks and indeed a prerequisite for local and global competitiveness in banking industry.¹ As a result of technological improvement the financial sector business environment has become extremely dynamic and experience rapid changes. Banks are under pressure to serve their customers electronically.

Banks have used electronic channels for years to communicate and transact business and with the development of the Internet and the World Wide Web (WWW) in the latter half of the 1990s; banks are increasingly using electronic channels for receive instructions and deliver their products and services to their customers.² The utilization of electronic channels to deliver banking products and service is generally referred to as electronic banking (here after E-banking), although the range of products and services provided by banks over the electronic channel vary widely in content, capability and sophistication. E-banking includes the provision of retail and small value banking products and services through electronic channels as well as large value electronic payments and other wholesale banking services.³

Even though, E-banking generally relates with the modern information technology, in technical terms it precedes the internet era by several decades.⁴ Its beginning dates back to the late nineteenth century when the telegraph was used for the transfer of financial funds. Although transfer of funds through telegram does not respond to the modern profile of e-banking it represented the innovation of the time. Legal problems posed by the telegram service are similar

¹ Worku G, Tilahun A, Tafa MA, “The Impact of Electronic Banking on Customers’ Satisfaction in Ethiopian Banking Industry (The Case of Customers of Dashen and Wogagen Banks in Gondar City)”, Journal of Business and Financial Affairs 5: 174, (2016) available at: [doi:10.4172/2167-0234.1000174](https://doi.org/10.4172/2167-0234.1000174)

² BIS, Management and Supervision of Cross-border Electronic Banking Activities, Basel Committee on Banking Supervision, (2003), p.2 available at: www.bis.com

³ Ibid

⁴ Ulpian Hoti, “E-Banking in Albania: The Legal Framework, Its Practices and Challenges in Today's Reality”, Mediterranean Journal of Social Sciences, Vol. 6 No. 4, (2015) available at: [Doi:10.5901/mjss.2015.v6n4p266](https://doi.org/10.5901/mjss.2015.v6n4p266)

to the issues posed by modern e-banking services. Despite its early use, the concept of banking via the electronic means specially the internet has evolved spontaneously proportionally to the development of World Wide Web. The internet has become a new way for the distribution of banking services. Especially payment through electronic funds transfer one category of e-banking is described as the 3rd edge in the payment history next to cash and paper based payment mechanisms.

E-banking is a generic term for delivery of banking products and services through electronic channels such as the telephone, the internet, the cell phone, etc. It facilitates an effective payment and accounting system thereby enhancing the speed of delivery of banking services considerably.⁵ E-banking is also an umbrella term for the process by which a customer may perform banking transactions electronically without visiting a branch and includes the systems that enable customers of banks, individuals or businesses, to access accounts, transact business, or obtain information on financial products and services through a public or private network, including the internet. The concept and scope of e-banking is evolving.

Thus the changing reality of banking poses challenges to banks and policymakers and supervisors. Banks rely increasingly on technology to compete in an increasingly competitive business environment and thus need to effectively manage the IT security and other related risks. Central Banks and supervisory authorities are facing new challenges in banking supervision as well as in designing and implementing monetary policy. The growing scope of e-banking and increasing complexity of banking products and services demands continuous adaptation of regulatory framework and effective supervisory oversight.

E-banking is generally an extension of traditional banking, using electronic delivery channels to deliver banking products and services to the customers. Hence, generally the existing laws, prudential bank regulations, and supervisory policies apply and govern the e-banking activities. However, the peculiar nature of e-banking delivery channels require tailored regulatory rules to address the risks associated with them. In light of the technologically complex and rapidly evolving nature of the e-banking delivery channels, bank supervisors are significantly challenged

⁵ Worku et al, cited above at note 1, p.4

in designing additional regulatory rules and specialized supervisory guidance to address the issues and risks specifically posed by e-banking.

1.2. Statement of the Problem

Digital technologies are increasingly being integrated in the economy every country and digitalization is affecting individuals and businesses. In the financial sector technology is making significant impact by introducing new products, services, distribution models and providers. Technology is transforming finance around the world at an unprecedented rate, generating new opportunities and new risks. Hence, financial regulators are required to develop new approaches to regulation, including the use of technology, to balance the benefits of innovation and economic development with the need for financial stability and consumer protection.

Financial services sectors are among the most heavily regulated and supervised areas in any economy. Regulatory goals generally include preserving public confidence in the financial system, ensuring its integrity and stability, protecting users whether consumers, business or investors and promoting efficiency through competition. Regulatory policies are put in place to ensure minimal risk of loss, prevent systemic meltdowns, address illicit or fraudulent activities, deliver compensation to users in the event of problem, and encourage enough choice to support various types of economic activity.

Despite a rapid increase in the number of financial institutions operating in the country since domestic financial liberalization upon the demise of the Derg regime, the Ethiopian banking system is still underdeveloped compared to the rest of the world. Currently there are 16 private and two state owned banks operating in Ethiopia. The use of checks is mostly limited to government institutions, NGOs and some private businesses. Commercial banks in Ethiopia provide the same services with the same operational style that they used to offer before decades. The common banking functions provided by public and private banks in Ethiopia are deposit mobilization, credit allocation, money transfer and safe custody of cash. Banks in Ethiopia are not specialized in improving customer services, design flexible and customized products, and differentiate themselves in a market by product features that are easily identified.

Due to the pervasive impact the technology is having on the financial services globally the Ethiopian Banking sector cannot withstand the impact forever and even though slowly has

started adopting technology in service delivery. It has been a while since the Ethiopian banks have started adopting technology to deliver banking products and services. The appearance of e-banking in Ethiopia started in 2001, when the largest state owned, Commercial Bank of Ethiopia (CBE) introduced Automated Teller Machine (here after ATM) to deliver service to the local users.⁶ Thereafter, the digitalization of the financial service in the country is increasing though it is still at nascent stage.

E-banking delivery system has allowed positive changes within the banking system in terms of convenience, efficiency and accessibility. But it has also opened up the industry to many challenges. E-banking delivery channels have the features of being anonymous, impersonal and being instant with far-reaching ramifications on customer privacy, confidentiality, security, interoperability of systems, consumer protection and contract formation rules. Thus, financial regulators are expected to formulate an enabling regulatory framework to regulate e-banking system that manages the risks and facilitate innovation. The task that awaits the financial sector regulators is not simple by any measure.

The National Bank of Ethiopia (hereafter, NBE), the central bank and the financial sector regulator, in the country has issued a directive in 2012 on the regulation of mobile and agent banking business.⁷ As is stated in the preamble of the directive the regulator intends to promote the use of technology and innovative financial service delivery channels such as mobile banking and the use of agents that will have significant contribution in deepening financial service accessibility to the wider section of the population at an affordable price.

In addition, the government of Ethiopia has issued National Payment System Proclamation (NPSP) with the intention to modernize the payment system of the country.⁸ Electronic fund transfer mechanism is made the integral part of the payment system and the modernization project. It has also issued an electronic signature law to create conducive legal framework to promote electronic commerce and electronic government service in the country.⁹ Moreover, as part of proactive initiatives on its part, the government has also issued computer crime legislation

⁶Ayana Gemechu Bultum, "Factors Affecting Adoption of Electronic Banking System in Ethiopian Banking Industry", *Journal of Management Information System and E-commerce*, Vol.1, No.1, (2014), available at: www.aripd.org/jmisse

⁷ Mobile and Agent Banking Services Directive, Directives No FIS /01/2012, National Bank of Ethiopia

⁸ The National Payment System Proclamation, 2011, Proclamation No. 718/2011, *Neg. Gaz.*, 17th Year, No. 84

⁹ Electronic Signature Proclamation, 2018, Proclamation No.1072/2018, *Neg. Gaz.*, 24th Year, No.25

in order to protect and secure the utilization of information communication technology and prosecute various computer crimes perpetrated against the information communication system. The Anti-Money Laundering and Financing of Terrorism law is also promulgated in order to protect the soundness and efficiency of the financial system. Furthermore, there are different government policies and laws that are issued by the government of Ethiopia that have an impact on the regulation of e-commerce in general and e-banking in particular.

The regulation of e-banking system cuts across a broad spectrum of regulatory domains apart from conventional bank regulation and touches upon the regulation of other sectors of the economy. In this research work the e-banking regulatory framework in Ethiopia will be assessed in order to assess how the regulator balances the benefits of innovation in the financial services with the need to maintain financial stability and consumer protection. Furthermore, the legal and regulatory framework pertaining to the regulation of e-banking system in Ethiopia will be assessed to identify regulatory gaps and areas of consideration to determine if there is a need to undertake regulatory reform in the system in the country.

1.3. Research Question

This research work seeks to answer the main question:

- **Should there be e-banking regulatory reform in Ethiopia?**

In order to answer the above main question the following specific questions are considered:

- What are the policies and legal framework for regulating e-banking in Ethiopia?
- Is the regulatory framework adequate to regulate e-banking system?
- How effective is the current regulatory framework in facilitating innovation in financial service delivery without compromising stability of the system?
- What legislative and regulatory reforms are necessary to further strengthen the regulatory system?

1.4. Objectives of the Study

1.4.1. General Objectives

The main objective of this study is to examine the legal and policy framework relating to e-banking regulation in Ethiopia and to determine if regulatory reform is necessary.

1.4.2. Specific Objectives

- Critically identify and analyze the policies and legal framework and regulatory rules pertaining to e- banking in Ethiopia
- Assess the effectiveness and adequacy of the e-banking regulatory framework in balancing innovation and stability in the sector
- Access and evaluate the practice of electronic banking regulation in Ethiopia and its implication for financial inclusion goal of the country
- Evaluate the sufficiency of the regulatory scheme in protecting consumer welfare
- Make recommendations regarding regulatory reform that has to be made, if any, in order to further modernize the regulatory scheme.

1.5. Methodology of the Study

The research work is based on a qualitative research method. In order to investigate the research issue under consideration both primary and secondary sources of data have been utilized. As a primary source of data relevant laws, policies and rules relevant to the regulation of e-banking in Ethiopia were collected, analyzed and interpreted to analyze if there is a need for regulatory reform. The relevant Policies, Proclamations, Regulations, and Directives and circulars of the NBE have been collected and analyzed, as well as, key informant interview was also conducted to collect primary data on the practice of e-banking regulation in Ethiopia. As a secondary source of data relevant literature on the subject of e-banking both foreign and domestic such journals, unpublished materials, model rules were collected from internet sources and analyzed to highlight on major conceptual, theoretical and legal frameworks of regulation and supervision of e-banking.

1.6. Significance of the study

The e-banking system development is a buzzing issue at international level especially in developing countries for it offers opportunities for economic transformations. In Ethiopia the e-banking system is at nascent stage but with enabling regulatory support there are ample opportunities for its growth. Hence, the findings of this research may contribute to the effort of further strengthening the regulatory framework of e-banking in Ethiopia and understanding of the ecosystem of e-banking system in the country. Moreover, there is a dearth of research and

works on the regulatory aspects e-banking in Ethiopia and this work may serve as impetus for potential researchers to conduct further studies on the sector.

1.7. Limitations of the Study

There is huge problem in locating and collecting materials relevant to e-banking regulatory issues in Ethiopian. Dearth of domestic research on the topic area is a great challenge. Hence, the researcher is compelled to rely on foreign works to analyze the e-banking regulatory framework in Ethiopia. Due to the challenges of regulating the ever changing technological innovation this research work does not exhaustively deal with all regulatory issues in e-banking platforms of all forms rather it only deals with common regulatory concerns in e-banking.

1.8. Organization of the Study

This research work is arranged in four chapters. The first chapter deals with introductory matters. It gives the overview of the background of the study, statement of the problem, research questions, objectives, methodology, significance and limitations of the study. The second chapter deals with the development of the E-banking in Ethiopia. The definition, evolution, factors affecting the adoption of e-banking, e-banking delivery channels, the prospects and challenges of e-banking, risks in e-banking and the connection between e-banking and financial inclusions are highlighted from the international and Ethiopian perspectives.

The third chapter examines e-banking regulation and regulatory reform issues in Ethiopia. The essence and justifications for regulations, areas of regulatory intervention with regards to e-banking including telecommunications regulation, regulation of the security of e-banking system, consumer protection concerns, market competition and the supervision of third party services providers are critically examined. Finally, the paper ends with conclusion and forwarding recommendations.

Chapter Two

The Development of E-Banking in Ethiopia

2.1. What is Electronic Banking?

Banks have used electronic channels for years to communicate and transact business with domestic and international customers. With the development of the internet and the World Wide Web (WWW) in the latter half of the 1990's banks started using electronic channels increasingly to receive instructions and deliver products and services to their customers.¹⁰ The delivery of banking products and services through electronic channels is generally referred to as e-banking although the range of products and services provided by banks over the electronic channel vary widely in content, capability and sophistication.¹¹ E-banking is also known as Net banking, Cyber banking, Virtual banking, Personal banking, and other names.

E-banking can be defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels.¹² It is the systems that enable financial institutions customers, individuals or businesses, to access accounts, transact business, or obtain information on financial products and services through a public or private network including the internet without visiting a bank branch. Customers access e-banking services using an intelligent electronic device, such as a personal computer, personal digital assistant, ATM, kiosk, or Touch Tone telephone.¹³

E-banking generally includes the provision of retail and small value banking products and services through electronic channels as well as large value electronic payments and other wholesale banking services.¹⁴ Bank products and services rendered through electronic means include deposit-taking, lending, account management, the provision of financial advice, electronic bill payment, and the provision of other electronic payment products and services such

¹⁰ Basel Committee, cited above at note 1, p.2

¹¹ Ibid

¹² Federal Financial Institutions Examinations Council "E-Banking", IT Examination Handbook , (2003), p.1 Free PDF available online.

¹³ Ibid

¹⁴ Ibid

as electronic money.¹⁵ There are two fundamental elements to definition of e-banking. These are the nature of the delivery channels through which activities are pursued and the means customers use to gain access to those channels.¹⁶ The bank products and services are delivered to the consumer through electronic means with or without the existence brick and mortar bank and the consumers transact with their bank and consume the products and services through electronic devices and visiting the physical bank may not be necessary. Hence, as working definition in this work e-banking refers to the delivery of banking products and services to customers through the medium of electronic channels of different kinds.

At this juncture, differentiating e-banking from electronic money (here after e-money) is important. Different bodies define e-money differently and a precise definition of electronic money is difficult to provide. Mobile Financial Services Working Groups of Alliance for Financial Inclusion¹⁷ defines e-money by listing its important features. Accordingly, e-money is a type of monetary value electronically recorded and generally understood to have the following attributes. First, it is issued upon receipt of funds an amount which equals the value of e-money issued. Second, it is stored on an electronic device e.g. a chip, prepaid card, mobile phone, or computer system. Third, it is accepted as a means of payment by parties other than the issuer; and lastly, it is convertible to cash.¹⁸

Others define e-money as stored value or prepaid payment mechanisms for executing payments via point of sale terminals, direct transfers between two devices, or over open computer networks such as the internet.¹⁹ Stored value products can be hardware or card-based also termed as electronic purses and software or network-based also termed as digital cash. Stored value cards can be single-purpose or multi-purpose. Single-purpose cards are used to purchase one type of good or service or products from one vendor while multi-purpose cards can be used for a variety

¹⁵ BIS, Risk Management for Electronic Banking and Electronic Money Activities, Basel Committee on Banking Supervision, (1998), p.3 available at: www.bis.com

¹⁶ Ibid

¹⁷ The Alliance for Financial Inclusion (AFI) is a network of financial inclusion policymakers led by its members and partners, central banks and other financial regulatory institutions from developing economies and includes member institutions from more than 80 countries.

¹⁸ Mobile Financial Services Working Group, Guideline Note No 1: Mobile Financial Services: Basic Terminology (March 2013) Alliance for Financial Inclusion, available at: http://www.afiglobal.org/sites/default/files/publications/mfswg_gl_1_basic_terminology_finalnewnew_pdf.pdf

¹⁹ Ayana, cited above at note, p.3

of purchases from several vendors.²⁰ Banks may participate in e-money schemes as issuers or performers of other functions including distributing e-money issued by other entities, redeeming the proceeds of e-money transactions for merchants, handling the processing, clearing, and settlement of e-money transactions, and maintaining records of transactions.²¹ To conclude, e-banking refers to the utilization of electronic delivery channels by banking organizations to deliver their products and services to consumers while on the other hand, e-money refers to the stored value or prepaid system used in payment system.

Under Ethiopian legal system there is no definition provided for e-banking. Even though there is no clear cut definition of e-banking there are some areas of law that touch upon the different topics relevant to e-banking. For example, Electronic Fund Transfer (EFT) is one of the major areas of e-banking and the National Payment System Proclamation defines fund transfer as;

*any transfer of funds, either representing an order of payment or a transfer of money, which is initiated by a person by way of instruction, authorization or order to a financial institution to debit or credit an account maintained with that financial institution and includes point of sale transfers, automated teller machine transactions, direct deposits or withdrawal of funds, transfers initiated by telephone, internet, card or other devices.*²²

Even though this specific law does not deal with e-banking taking into consideration the central role of banks in facilitating the payment system and the fund transfer mechanisms listed under this definitional article converges with the attributes of e-banking delivery channels it is fair to conclude that Ethiopian law recognizes the possibility of delivery of banking products and services through electronic channels. The law defines electronic as electrical, digital, magnetic, optical, biometric, electrochemical, wireless or electromagnetic technology or any other technology used in relation to the national payment system.²³ Hence, despite the fact that there is no clear provision of law that defines e-banking different Ethiopian laws recognize electronic delivery of banking products and services.

²⁰ Id, p.4

²¹ Ibid

²²National Payment System Proclamation, Article 2(13)

²³ Id. Article 2(8)

2.2. The Evolution of Electronic Banking

2.2.1. The International Trend

For centuries technological progress has been an important force in the transformation of finance. The deployment of innovation in the financial sector has a long history ranging from the development of double-entry book keeping, to the establishment of modern central banks and payments systems, and the recent introduction of complex asset markets and retail financial products. However, the changes have accelerated in the new millennium. New payment tools such as digital wallets have emerged and new service providers including internet, retail and telecom firms have entered the market of financial services.²⁴ Recent years have witnessed a rise in automation, specialization, and decentralization, while financial firms have found increasingly efficient and sophisticated ways of leveraging vast quantities of consumer and firm data. The technological advancement has an impact on all functions of finance, from making payments, to saving, borrowing, managing risks, and getting financial advice.²⁵

Technology and finance have a very long relationship that dates back to over 150 years with each responding to developments in the other over an extended evolutionary process.²⁶ However, in the recent years the pace of change in both finance and technology has moved more rapidly than ever before and resulted in the emergence of a new era of financial technology. The evolution of application of technology to financial service provision can be classified into three main eras.²⁷ The first era is the era of transformation of finance from analogue to digital that transcends from 1866 to 1967 and the financial services industry remained largely an analogue industry. The development of digital technology for communications and processing of transactions transformed finance from an analogue to a digital industry.²⁸ The second era that runs up to the 2008 Global Financial Crisis (here after GFC) the financial industry becomes globalized and digitalized. This era was dominated primarily by the traditional regulated financial services industry that used technology to provide financial products and services. The third era covers the

²⁴ Dong He (et al), *Fintech and Financial Services: Initial Considerations*, IMF Staff Discussion Note, SDN/17/05, (2017), p.8

²⁵ Ibid

²⁶ Dirk A. Zetsche/ Ross P. Buckley/ Douglas W. Arner /Janos Nathan Barberis, *Regulating a Revolution: From Regulatory Sandboxes to Smart Regulation*, EBI Working Paper series 2017-no.11. p.7

²⁷ Ibid. P.6

²⁸ Ibid, P.9

period post the 2008 GFC and is dominated by new start-ups and established technology companies that have begun to deliver financial products and services directly to businesses and the general public.²⁹ Even though, the interaction between finance and technology has a long history the evolutionary trends of financial technologies depict different trends in developed and developing countries.

- A. **Digital Transformation in Developed Markets:** In the developed world, the transition from an analogue to a digital financial industry started to occur in the late 1960's with the emergence of the hand held financial calculator and the ATM.³⁰ This development was followed by decades of increasingly rapid technological change leading up to the latest decade of extraordinarily swift technological developments.³¹ While electronic payment systems date back to the time immediately following the invention of the telegraph, the most important developments have occurred since the early 1970's with electronic payment systems such as Society for Worldwide Interbank Financial Telecommunications (SWIFT) and VISA. This multi-decade process took place through a carefully developed partnership between major central banks and financial institutions.³²
- B. **Digital Financial Services (DFS) in Developing Countries:** The emergence of the mobile telephone in the 1980's and its rapid expansion in developing countries from the 1990's set the stage for the emergence of digital financial services (DFS). DFS are the usage of mobile telephones or other digital platforms to increase access to finance and they are the efficient delivery mechanism for financial products and services in developing countries where there is low penetration and inaccessible physical banking infrastructure but high mobile penetration.³³ The rapid adoption of mobile telephones across large populations previously without access to communications technology provided the necessary infrastructure. Once mobile phones became widely used and available, network effects combined with unmet demand for financial services provided

²⁹ Ibid, P.15

³⁰Douglas W. Arner, János Barberis & Ross P. Buckley, "FinTech, RegTech, and the Reconceptualization of Financial Regulation", 37 Nw. J. Int'l L. & Bus.371 (2017). P.378 available at <http://scholarlycommons.law.northwestern.edu/njilb/vol37/iss3/2>

³¹ Ibid

³² Id. P.378

³³ Ibid

the opportunity to use the new, widely available technology to provide access to financial services.³⁴ Unlike the digitalization in developed countries wholesale and institutional markets, DFS in most developing countries developed independently of the efforts of financial regulators, usually led by mobile telecommunications companies. Financial regulators only began addressing potential risks to consumers and financial stability once mobile payments become wide and important in the domestic financial system.³⁵

C. FinTech Start-Ups: The recent developments in the evolution of financial technologies are the emergence of new entrants in the form of start-ups that are focused on combining new technology and finance for the benefit of consumers.³⁶ Fintech start-ups are companies applying technology to finance with focus on alternative financial techniques such as crowd funding, peer to peer lending (P2P) and robot advisory services. Even though successful fintech start-ups are not new occurrence, their numbers and profile have increased dramatically since 2008 GFC. This trend are embraced by established IT and e-commerce firms and new start-ups all applying technology to address challenges and create opportunities across the financial sector.

2.2.2. Evolution of E-Banking in Ethiopia

As is repeatedly stated the rapid growth and proliferation of information and communication technology is knocking the door of every organization in the world including Ethiopian banks. In the face of rapid expansion of e-banking systems throughout the developed and developing world Ethiopian financial sector cannot remain an exception in adopting the use of the system.³⁷ The appearance of e-banking in Ethiopia started in 2001 G.C when the largest state owned, Commercial Bank of Ethiopia (CBE), introduced ATM to deliver service to the local users.³⁸ In 2005, CBE become the member of Visa even though for variety of reasons the project was not successful as expected. In the same year of 2005 G.C Dashen Bank introduced ATM machines to provide banking services to its customers. The trend followed by Wegagen Bank in 2008 by introducing ATM machine to serve its customers. In 2010, Zemen Bank anchored the idea of

³⁴ Arner et al, cited above at note 30, p.378

³⁵ Ibid

³⁶ Ibid

³⁷ Gardachew Worku, "Electronic- Banking in Ethiopia- Practices, Opportunities and Challenges", Journal of Internet Banking and Commerce, Vol. 15, No 2, (2010)

³⁸ Ayana, cited above at note 6, p.8

single branch banking by launching full-blown internet banking service the first of its kind to Ethiopian banking industry.³⁹

In order to better enhance inter operability between ATM machines of different banks Premium Switch Solutions (S.C.) consortium was formed by three private banks; Awash International bank, Nib International Bank and United Bank and commenced operation 2012. The consortium is formed with the intention to increase interoperability among the e-banking delivery channels used by these individual banks.⁴⁰ Moreover, in 2011 NBE implemented core banking process and automated its operation, as well as, ordered all banks operating in the country to implement core banking solution. Currently, all the banks operating in the country has implemented core banking system and have automated their operations.

The e-banking system in the country is on upward trajectory as the number e-banking delivery channels and products and services being made available through it are increasing and the user of the facilities are expanding. The e-banking system is gaining ground and the numbers prove this assertion. By the end of March 2019, the 17 commercial banks in the country have availed 4624 ATM machines for their customers to use and out of the 17 commercial banks nine commercial banks have made 8187 POS machines accessible for the use by their customers.⁴¹ Nine commercial banks offer internet banking service and the number of the users have reached 409,480 and the number of mobile banking services users have reached 4,039,776 and eleven commercial banks have the mobile banking service by the time aforementioned.⁴²

All the commercial banks combined have issued 10,479,956 debit cards to their customers and the number of mobile wallet users has reached 2,722,643 and the service is being offered by eight commercial banks and lastly, the users of prepaid card users stand at 55,621 and six commercial banks offer the service by the end of March, 2019.⁴³ Likewise, the transaction being undertaken through the e-banking channels is also growing. For example in a period between January and March 2019, 30,621,402 transactions worth of birr 26,808,570,279.32 was conducted through ATM card. Even though, compared to other countries the e-banking system in

³⁹ Ayana, cited above at note 6, p.8

⁴⁰ Meaza Wondimu, The Practice of Electronic Banking in Ethiopia, (2013, Unpublished, AAU Faculty of Business), p.26

⁴¹ NBE, Payment and Settlement Directorate, (2018/19 FY III Quarter Report, Unpublished).

⁴² Ibid

⁴³ Ibid

Ethiopia is still at nascent stage, it is expanding and worth of regulators concern to further facilitate its development.

2.3. Factors Influencing Adoption of E-Banking

There are different factors that influence the adoption of technological innovation generally and e-banking in particular. Technology adoption within an organization is influenced by factors pertaining to the technological, the organizational, and the external environmental contexts.⁴⁴

- i. **The Technological Factor:** The technological factor refers to adopter's perception of e-banking attributes.⁴⁵ The typical attributes of technology considered in technological adoption are the perceived benefits and risks of the technology. Perceived benefits of e-banking cover both direct and indirect benefits to the banking industry as well as to the consumers.⁴⁶ Perceived risks includes the resistance faced by banking institutions in offering e-banking services such as customers' resistance to use the services which significantly hinder the growth of e-banking system. In the Ethiopia context the technological factor has significant influence on the adoption of e-banking and lack of confidence on security of the system and lack of trust on the banks technologies are factors that hinder the widespread usage of e-banking services.⁴⁷
- ii. **The Organizational Factor:** the organizational factor refers to the organization's characteristics that influence its ability to adopt e-banking system.⁴⁸ Organizations are different in their preference to adopt technological innovation influenced by a number of factors like, firm size, top management support and financial and human resources.⁴⁹ The availability of financial resources within the firms to adopt e-banking system is critical. These resources enable banking institutions to obtain human related

⁴⁴ Ayana, cited above at note 6, p.6

⁴⁵ Meaza, cited above at note 40, p.6

⁴⁶ Ibid, p.12

⁴⁷ Milkessa Belay, et.al, "Perceived Benefits and Challenges of Electronic Banking Adoption in Ethiopian Private Commercial Banks," European Journal of Business and Management, Vol.8, No.19, (2016) p.27 available online at: www.iiste.org

⁴⁸ Ayana, cited above at note 6, p.6

⁴⁹ Meaza, cited above at note 40, p.12

resources including the required skills and expertise to develop and support provision of e-banking services.

In Ethiopia lack of technical skill to repair and assemble e-banking technology at spot of the service is challenging because those technologies are usually imported from other part of the world and there are lack of capable staff at company level who can repair and adjust those technologies during stacking, shock or other technical problems, banks financial capability to adopt the technology, gaps in technological knowledge and skills influences adoption and expansion of e-banking.⁵⁰

- iii. **Environmental Factors:** The environmental factor refers to the external environment in which an organization operates and its suitability to support the development of e-banking services.⁵¹ There are four important environmental factors that influence the adoption e-banking system.⁵² The existence of proper legal frameworks to support the system is the first element. The existence and maturity of e-commerce legal frameworks within a country influence the diffusion of online transactions including e-banking. The second is the national ICT infrastructure that supports the adoption of e-banking. An adequate development and quality of a nations ICT infrastructure is a critical element for the e-banking adoption and expansion. Thirdly, competitive pressures that influence a bank to develop and adopt e-banking initiatives and change perception towards e-banking system and lastly, direct or indirect government support affects the adoption of e-banking. Government has a role in creating a favorable environment and impetus for banking institutions and their customers so that the services can be diffused with the community.⁵³ In the Ethiopian context there is a problem with regard to prerequisite infrastructures for expansion of e-banking system like the availability of enriched internet network, sustainable electric power supply.⁵⁴

2.4. E-Banking Delivery Channels

The e-banking system is transforming the banking and financial industry in terms of the nature of core products or services and the way these are packaged, proposed, delivered and

⁵⁰ Milkessa et al, cited above at note 47, p.27

⁵¹ Ayana, cited above at note 6, p.6

⁵² Meaza, cited above at note 40, p.13

⁵³ Ibid

⁵⁴ Milkessa et al, cited above at note 79, p.28

consumed.⁵⁵ Compared with traditional channels of offering banking services through physical branches, e-banking enables banking service providers utilize internet and other electronic channels to deliver traditional banking services to their customers, such as cash withdrawals, foreign currency exchange, transferring funds, balance inquiry, electronic bill payment, applying for letter of credit, downloading copies of bank statement, cheque book request, cheque stop payment request, account alerts, security alerts and reminders and other services.⁵⁶ The channels used in the delivery of e-banking include plastic cards such as debit cards, credit cards, and prepaid cards, personal computers, telephone, mobile phones, internet, ATM, POS or point of interaction machines. The brief descriptions of the major channels for e-banking are provided hereunder.

- i. **Debit cards:** A debit card also known as a bank card or cheque card is a plastic card that provides an alternative payment method to cash when making purchases. Debit cards function as electronic cheque and funds can be withdrawn directly from either bank account or from the remaining balance on the card. In some cases the cards are designed exclusively for use on the internet and there is no physical card.⁵⁷ On the other hand, prepaid debit cards are debit cards that are not linked to a customer's account. They are paid for in advance before being used by cardholders. Prepaid cards can be used as gift cards, payroll card, travel cards etc.⁵⁸
- ii. **Credit Cards:** A credit card is a small plastic card issued to users as a system of payment. It allows its holder to buy goods and services based on the holder's promise to pay for these goods and services. The issuer of the card creates a revolving account and grants a line of credit to the consumer or the user from which the user can borrow money for payment to a merchant or as a cash advance to the user.⁵⁹ A credit card is different from a debit card in that it does not involve the withdrawal of money from the users account after every transaction.⁶⁰

⁵⁵ Solomon Worku, Role of Electronic Banking on Financial Performance of Commercial Banks in Ethiopia, (2016, Unpublished Senior Thesis AAU school of Graduate Studies), p.2

⁵⁶ Id, p.1

⁵⁷ Id, p.21

⁵⁸ Tilahun Girma, Opportunities and Challenges of Agent Banking the Case of Selected Commercial Banks in Ethiopia, (2017, St Mary's University School of Graduate Studies unpublished) p.10

⁵⁹ Solomon, cited above at note 56, p.21

⁶⁰ Tilahun, cited above at note 59, p.10

- iii. **Automated Teller Machines (ATM):** ATM is a computerized telecommunications device that provides the customer of a financial institution with space to undertake financial transaction in a public space without the need for a human clerk or bank teller. ATM combines a computer terminal, recordkeeping system and cash vault in one unit, permitting customers to enter the bank's book keeping system with a plastic card containing a Personal Identification Number (PIN) or by punching a special code number into the computer terminal linked to the bank's computerized records, 24 hours a day.⁶¹ It offers several retail banking services to the customer and using an ATM customers can access their bank accounts in order to make cash withdrawals and check their account balance.
- iv. **Point-of-Sale Transfer Terminals (POS):** POS also sometimes referred to as point of purchase (POP) or checkout named after the location where a transaction occurs refers to the hardware and software used for checkouts and it is the equivalent of an electronic cash register. POS terminal manages the selling process by a salesperson accessible interface.⁶² The system allows consumers to pay for retail purchase with a check card and the purchase amount is transferred immediately from account of debit card holder to the store's account.
- v. **Mobile Banking:** Mobile banking (m-banking) refers to the conducting of banking activities like balance checks, account transactions, payments, credit applications and other banking transactions through a mobile phone.⁶³ M-banking is most often performed via SMS or the Mobile internet but can also use special programs called clients downloaded to the mobile device.⁶⁴ M-banking is used in many parts of the world with little or no infrastructure, especially remote and rural areas and in countries where most of their population is unbanked. The scope of offered services may include facilities to conduct bank and stock market transactions, to administer accounts and to access customized information.

⁶¹ Solomon, cited above at note 56, p.22

⁶² Solomon, cited above at note 56, p.23

⁶³ Ibid

⁶⁴ Beza Muche, *Assessment of the Opportunities and Challenges for the Adoption of E-Banking Service in Ethiopia*, (2010 Mekele University Department of Accounting and Finance College of Business and Economics, Senior Thesis Unpublished), p.13

- vi. **Internet Banking:** Internet banking refers to systems that enable bank customers to access accounts and general information on bank products and services through a personal computer (PC) or other intelligent device including wholesale products for corporate customers as well as retail consumers.⁶⁵ Other e-banking channels like “Tele Banking” whereby services are provided through telephone, “Home Banking” that allows customers undertake banking transactions from the convenience of their house by automating the service with the help of computer and a telephone are other e-banking delivery channels.

With continued technological innovation there is a possibility for the creation of other delivery channels to facilitate the further sophistication and expansion of e-banking delivery channels. Some of these e-banking delivery channels are already introduced in the Ethiopian banking system such as ATM, POS machine, m-banking, and internet banking and there is a possibility that other channels would be introduced in the near future.

2.5. E-Banking Delivery Models

The approach or model that a company employs to rollout services is often dependent on the country’s current financial laws and regulations and the degree of flexibility the financial regulator wishes to allow in making the services available.⁶⁶ In some cases any model or approach may be used and the decision on how to advance the banking service will be more flexible based on what policymakers and service providers think will work best. In other cases countries may have detailed or strict regulations that will limit the ability of financial service providers to offer banking services. Consequently, banking services providers may be required to adopt a particular model or the legislators and/or regulators will have to make changes in order for a wider set of banking services to be offered.⁶⁷

Basically e-banking services are offered in two major ways.⁶⁸ The first mechanism is where the traditional brick and mortar bank combines traditional banking services with electronic delivery

⁶⁵ Beza, cited above at note 65, p.10

⁶⁶ International Telecommunications Union, The Regulatory Landscape for Mobile Banking, Discussion Paper, October, 2011, p.3

⁶⁷ Ibid

⁶⁸ Andrea Schaechter, Issues in Electronic Banking: An Overview, IMF Policy Discussion Paper, 2002, PDP/02/6, p.4 available at: www.imf.org

channel to offer the banking services to its customers. The second mechanism is where banks predominantly offer their products and services through electronic delivery channels without having a physical branch. These kinds of banks are called virtual banks, Branchless banks or internet only banks.

In Ethiopia e-banking service is predominantly being provided by incumbent banks, i.e. the traditional brick and mortar banks. The bank licensing and regulatory scheme is established with the assumption of the establishment of physical bank and it is difficult to assume the establishment of virtual banks in Ethiopia. The challenge faced by Zemen bank that introduced internet based banking to Ethiopia to get license and start operation can be cited as an example.

2.6. Prospects and Challenges of E-Banking

E-banking provides vast opportunities to banks and their customers. The major characteristics of e-banking are allowing fast access to products and services around clock point independent of the location of the customer. The electronic delivery channels increase transparency and may led to higher competition among banks. Moreover, with lower costs banks can penetrate new markets and expand their geographical reach. The digitalization of transaction helps reduce costs for banks and increase their efficiency. Bank products would become more standardized and there would be incentives to introduce new bank products.⁶⁹ Under this section the opportunities e-banking offer to the customers, banks and the economy and challenges it poses is dealt with.

2.6.1. Opportunities of E-Banking

The application of technological innovation to finance holds potential benefits to all users of financial services that includes expanding access to financial services by reaching under-served consumers i.e. financial inclusion, reducing transaction costs, providing greater transparency with simpler products and clear cost disclosures, providing greater convenience and efficiency and result in an enhanced customer experience by providing a better understanding of products

⁶⁹ Id, p. 2

and terms.⁷⁰ Hence, the followings are the opportunities presented by the e-banking delivery channels categorically speaking.

- i. **Better and more tailored banking services at lower costs:** Banks have extensive experience how to bring products to a regulated market and greater application of financial technology could help the banking industry improve their traditional offerings in many ways and could also increase the efficiency of their businesses.⁷¹ Innovations may speed up transfers and payments and cut their costs that facilitate the provision of banking services at lower cost.
- ii. **Efficiency:** Innovations in financial services have the potential to lead to greater efficiencies. Adoption of productivity enhancing technologies could strengthen business models of incumbent financial institutions.⁷² Innovation could facilitate improvements in decision-making processes by improving the models that financial institutions and investors may employ.
- iii. **Financial inclusion:** e-banking in the form of digital finance will improve access to financial services by under-served groups. Technology can reach remote locations. Improving access to a range of financial services across all of the economic functions where there is currently a large unbanked population and where the financial system is in early stages of development is an important public policy issue.⁷³ The promise of digital finance to reach wide range people, reduce costs and if coupled with the appropriate financial capability to broaden access to finance is unprecedented. Financial services could be provided to more people with greater speed, accountability, and efficiency.

⁷⁰BIS, Implications of fintech developments for banks and bank supervisors, Basel committee for Banking Supervision, (2018), p.22 available at: www.bis.org

⁷¹ Ibid

⁷² Financial Stability Board, Financial Stability Implications from FinTech: Supervisory and Regulatory Issues that Merit Authorities' Attention, (June 2017), available at: www.fsb.com

⁷³ Id, p.16

2.6.2. Challenges of E-Banking

Despite its numerous benefits there are challenges in the implementation of e-banking system. Notwithstanding the significant benefits of e-banking and its capabilities, it carries risks and challenges which needs to be recognized and managed by banking institutions in a prudent manner. The fundamental characteristic of e-banking poses a number of risk management challenges. The fundamental features that affect risk management efforts are the unprecedented speed of change relating to technological and customer service innovation in e-banking that has lead banks experience competitive pressure to roll out new business applications in compressed time frame.⁷⁴ This competition intensifies the management challenge to ensure that adequate strategic assessment, risk analysis and security reviews are conducted prior to implementing new e-banking applications. E-banking increases banks dependence on information technology thereby increasing the technical complexity of many operational and security issues and furthers a trend towards more partnerships, alliances and outsourcing arrangements with third parties many of whom are unregulated.⁷⁵ This development is leading to the creation of new business models involving banks and nonbank entities such as internet service providers, telecommunication companies and other technology firm's involvement in financial service delivery.⁷⁶ The ubiquitous and global nature of internet as well as being open network accessible from anywhere in the world by unknown parties with routing of messages through unknown locations and via fast evolving wireless devices makes the protection of security of the system challenging.⁷⁷ Due the above listed nature of e-banking there are challenges that the banks, customers and the regulatory organs face with regard to the e-banking system. The followings are the major challenges;

- i. **Security Risks:** One of the biggest challenges and the basic requirements of e-banking systems are ensuring the security of the system. Securing the process in e-banking involves authenticating data of the customer and banker and protecting the information to be transmitted from interception.⁷⁸ Open electronic delivery channels

⁷⁴ Basel Committee, cited above at note 2, p.5

⁷⁵ Ibid

⁷⁶ Ibid

⁷⁷ Ibid

⁷⁸ Michael Adbib, Challenges and Opportunities of Electronic Banking: A case Dashen Bank and Nib International Bank, (2013, Unpublished, St Mary University graduate school), p.16

create new security issues for banks with respect to confidentiality and integrity of information, non-repudiation of transactions, authentication of users and access control.⁷⁹ E-banking system that is not secured may not get trust from its users and trust is one of the crucial factors to ensure the acceptance of e-banking system by users. As e-banking system highly depends on critical ICT systems, it creates vulnerabilities in financial institutions, businesses and potentially harms customers. It is imperative for banks to understand and address security concerns in order to leverage the potential of ICTs in delivering e-banking systems.⁸⁰

Financial institutions providing e-banking services are expected to develop robust tools to verify the identity and authenticity of transaction and bankers are required to be sensitive to managing the security risk arising from their internal networks. If not managed properly, internal security exposures can also compromise the integrity and confidentiality of bank records and customer data.⁸¹

- ii. **Infrastructure:** Effective deployment of e-banking requires reliable and cost effective infrastructure that is accessible to the majority of the population. Low level of internet penetration and poorly developed telecommunication infrastructure impede smooth development and improvements in e-commerce in developing countries.⁸² The implementation of e-banking is impeded by unavailability of ICT infrastructure and the availability of proper infrastructure is the other challenge in e-banking especially in developing countries like Ethiopia.
- iii. **Regulatory and Legal Issues:** National, regional or international set of laws, rules, and other regulations are important prerequisites for successful implementation of e-banking services. Legal and regulatory framework that builds trust and confidence in the system is very essential. Regulatory and legislative support is essential for protecting the interests of customers and banks in various areas relating to e-banking and payment systems.⁸³ Rules on money laundering, validity of electronic data, electronic contracts, and electronic signature are all important for the expansion of e-

⁷⁹BIS, Electronic Banking Group Initiatives and White Papers, Basel Committee for Banking Supervision, (2000) , p.17 available at: www.bis.org

⁸⁰ Michael, cited above at note 79 , p.17

⁸¹ Basel Committee, cited above at note 80, p.15

⁸² Michael, cited above at note 79, p.17

⁸³ Ibid

banking system. Hence, absence of proper legal and regulatory framework is another challenge that affects the development of e-banking system.

- iv. Socio-Cultural Challenges:** Cultural and historical differences in attitudes and the use of different forms of payment complicate the task of developing e-banking system challenging.⁸⁴ Difference in the degree of the required security and efficiency among peoples of different cultures and level of awareness is a challenge to the e-banking development. Consumer's confidence and trust in the traditional payment system has made customers less likely to adopt new technologies.⁸⁵ New technologies will not dominate the market until customers are confident that their privacy will be protected and adequate assurance of security is guaranteed. New technology also requires the test of time in order to earn the confidence of the people, even if it is easier to use and cheaper than older methods. Hence, socio-cultural attitudes are the other challenge to the expansion of e-banking

2.7. Risks in Electronic Banking

The rapid development of e-banking capabilities carries risks as well as benefits. The unprecedented speed technological changes and customer service innovation, the ubiquitous and global nature of open electronic networks, the integration of e-banking applications with legacy computer systems and the increasing dependence of banks on third parties for the provision of information technology products for the provision of e-banking services expose e-banking system to different kinds of risks.⁸⁶ Hence, these risks needs to be recognized, addressed and managed by banking institutions in a prudent manner in accordance with the fundamental characteristics and challenges of e-banking services.⁸⁷ Accordingly, the implications of a bank's use of the e-banking delivery channel on its strategic risk, operational risk, reputational risk, legal risk, credit risk, liquidity risk, market risk and foreign exchange risk have to be considered. Here under the brief explanations of some e-banking risks are provided.

⁸⁴ Michael, cited above at note 79, p.19

⁸⁵ Ibid

⁸⁶ BIS, "Risk Management principles for Electronic Banking", Basel Committee for Banking Supervision, (2001), p.9 available at: www.bis.com

⁸⁷ Ibid

2.7.1. Strategic and Business Risk

Strategic risk is one of the most significant risks that e-banking activities present for banking organizations. Strategic risk differs from other risk categories in that it is more general and broad in nature.⁸⁸ Growing customer acceptance and demand for e-banking coupled with the potential efficiencies afforded by electronic delivery channels require banks develop a strategy as to the usage of electronic delivery channel to provide informational and/or transactional service to customers.⁸⁹ The rapid changes in technology, the pace of competition with other banks and non-bank competitors and the nature of the strategy could expose banks to substantial risk if the planning and implementation of the strategy is flawed or not well executed. Bank managements are required to carefully consider how their organizational strategy will help maintain the competitiveness and profitability of the institution without leading to unwarranted increases in its risk profile. Whereas, regulators are expected to supervise banking institutions to carefully assess the pros and cons associated with their strategic options. Thus, the banks management has to be prudent and the financial sector regulator watchful of the development of the strategy the financial institution employs to roll out e-banking services to minimize strategic risks.

2.7.2. Operational Risk

Reliance on technology for all facets of e-banking makes operational risk the significant risks in e-banking system.⁹⁰ The reliance on new technology to provide services makes security and system availability the central operational risks in e-banking. Security threats can come from inside or outside the system and banking regulators and supervisors must ensure that banks have appropriate practices in place to guarantee the confidentiality of data, as well as the integrity of the system and the data. Banks' security practices should be regularly tested and reviewed by outside experts to analyze network vulnerabilities and recovery preparedness.⁹¹ Furthermore, as technology is dramatically changing banks need to ensure that they have appropriate control procedures and audit processes. Managing heightened operational risks needs to be an integral part of banks' overall management of risk and supervisors needs to include operational risks in

⁸⁸ Basel Committee, cited above at note 80, p.15

⁸⁹ Basel committee, cited above at note 89 above, 16

⁹⁰ Ibid

⁹¹IMF, Challenges of the E-Banking Revolution, Finance and Development A quarterly magazine of IMF, September 2002, Vol.39, No.3 available at: www.imf.org

their safety and soundness evaluations.⁹² To limit operational risk, banking organizations have to implement enterprise wide structural design and technology infrastructure that can facilitate interoperability, ensure the security, integrity and availability of data and support the management of relationships with third-party service providers.

2.7.3. Reputational Risk

E-banking exposes the financial institution to reputational risks if security breaches occur and availability of the system is disrupted. The more a bank relies on electronic delivery channels the greater the potential for reputational risks. Banks have long based their business on a reputation of trust. The ability to provide a trusted network to support e-banking is critical and a bank's reputation can be damaged by e-banking services that are poorly executed or otherwise alienate customers and the public.⁹³ Moreover, any adverse development that prevents the availability of the service, failure to deliver secure, accurate and timely e-banking services on a consistent basis, failure to respond to inquiries, customer misuse of security precautions or ignorance about the need for such precautions can damage reputation.⁹⁴ Hence, it is imperative that the financial institution providing e-banking service undertakes all risk management precautions to avert all the risks associated with the e-banking system for it has an implication on its reputation including amplified security risks that may result in a loss of confidence in electronic delivery channels.

2.7.4. Legal Risks

Legal risk arising from e-banking activities represents another area of concern. In every jurisdiction a work of examining how existing legal and regulatory frameworks originally designed to address the physical banking deal with the developing e-banking delivery channels and identifying potential ambiguities are being undertaken.⁹⁵ Unauthorized use or misuse of data collected over the electronic channel, unauthorized access to the confidential information of consumers by infiltrators, staff misuse of data are the potential sources of legal risks to a banking

⁹² Ibid

⁹³ IMF, cited above at note 92, p.7

⁹⁴ Ibid

⁹⁵ Ibid

organizations.⁹⁶ The legality of emerging areas of law such as the enforceability of electronic contracts and digital signatures, effective know your customer (KYC) practices all have an implication for legal risks related to e-banking. Hence, banking institutions are expected to comply with legal and regulatory rules developed by the financial regulator to regulate the e-banking system and avoid the legal risks that may arise in this regards.

2.7.5. Other Traditional Banking Risks

The e-banking delivery channels will also have implications on the traditional banking risks such as credit risk, liquidity risk, interest rate risk, and market risks.⁹⁷ The introduction of e-banking does not necessarily result in an increase or decrease in the risk profile of the institution but risks can be shifted sometimes in complex ways and requires serious considerations.

Generally, in order to mitigate and avert the risks associated with e-banking systems banking organizations have to put in place comprehensive and rigorous risk management principles and practices. The risk management rules and principles shall be flexible to accommodate changes in the type and intensity of risks associated with the ever changing e-banking activities. Moreover, as e-banking system is constantly evolving the risk management process shall also evolve to accommodate changes. The Ethiopian e-banking sector is still at nascent stage of development but, it is vulnerable to the risks mentioned above and the financial institutions shall set effective risks management principles and practices to minimize the risks associated with e-banking services platforms. Moreover, the regulator NBE needs to consider these risks and put in place an enabling regulatory framework that minimizes these risks and help foster innovation in the field.

2.8. E-Banking and Financial Inclusion

Financial inclusion refers to both the access and active use of financial products and services within the formal financial system by all groups of the society. There is no universally accepted definition of financial inclusion and different international organizations define financial inclusion differently. The Consultative Group to Assist the Poor (CGAP) defines financial inclusion as a state in which all working age adults have effective access to credit, savings,

⁹⁶ Ibid

⁹⁷ IMF, cited above at note 92, p.7

payments and insurance from formal service providers.⁹⁸ Effective access is defined in this case as convenient and responsible service delivery, at a cost affordable to the customer and sustainable for the provider.⁹⁹ The OECD defines financial inclusion as;

*the process of promoting affordable, timely and adequate access to regulated financial products and services and broadening their use by all segments of society through the implementation of tailored existing and innovative approaches, including financial awareness and education, with a view to promote financial wellbeing as well as economic and social inclusion.*¹⁰⁰

Financial inclusion is a state in which every individual and business can access formal financial institution and effectively utilize the services without undue constraints. The National Financial Inclusion Strategy of Ethiopia does not give a definition of financial inclusion rather it deals with how to achieve financial inclusion.¹⁰¹

Financial inclusion aims to provide the unbanked and low-income households and business with a range of financial services that they can use to smooth their consumption and insure themselves against economic shocks.¹⁰² Financial inclusion is recognized as an important mechanism for alleviating poverty and promoting a country's broader economic development.¹⁰³ E-banking delivery channels and generally the digitalization of financial services provide an opportunity to address barriers to financial inclusion such as the high costs of providing financial services and physical infrastructure constraints. Hence, e-banking is highly intertwined with the objectives of achieving inclusive finance for all. The benefits of digitalization such as lower consumer costs, convenient, faster and secure transactions, and

⁹⁸ CGAP Global Partnership for Financial Inclusion, Global Standard-Setting Bodies and Financial Inclusion for the Poor Toward Proportionate Standards and Guidance, A White Paper Prepared by CGAP on Behalf of the G-20's Global Partnership for Financial Inclusion, 2016, p.1 available at: www.gpfi.org

⁹⁹ Ibid

¹⁰⁰ OECD, Improving Financial Literacy: Analysis of Issues and Policies: OECD, (2005). Available at: www.oecd.org

¹⁰¹ See the introductory part of the strategy, NBE, National Financial Inclusion Strategy(NFIP), April 2017

¹⁰² Ross Buckley, Jonathan Greenacre, and Louise Malady, "The Regulation of Mobile Money in Malawi", 14 Wash. U. Global Stud. L. Rev. 435 (2015), p.440 available at: http://openscholarship.wustl.edu/law_globalstudies/vol14/iss3/7

¹⁰³ Ibid

innovative product design enable reaching disadvantaged groups and in doing so integrate these vulnerable groups into the formal financial system.¹⁰⁴

The Ethiopian National Financial Inclusion Strategy aims to improve access to and usage of formal financial products and services by the financially excluded section of the society using a structured approach based on four interrelated pillars of action; strengthen financial and other forms of infrastructure; ensure the supply of an adequate range of suitable products, services and access points; build a strong financial consumer protection framework; and improve financial capability levels.¹⁰⁵ The expansion of a diverse and ubiquitous network of convenient and interoperable access point that includes alternatives to traditional financial institutions such as agent, ATM, POS, mobile and internet banking and card system are considered as a part of the strategy.¹⁰⁶ Hence, the expansion and sophistication of the e-banking system will contribute to the financial inclusion strategy and with enabling regulatory design and appropriate governmental support it offers a solution to the pervasive financial exclusion in the country.

¹⁰⁴OECD, Financial inclusion and consumer empowerment in Southeast Asia, (2018), p.9 Available at: www.oecd.org

¹⁰⁵ NFIP, cited above at note 102, p.12

¹⁰⁶ Ibid

Chapter Three

The E-Banking Regulation and Regulatory Reform Issues in Ethiopia

3.1. Introduction

The future of the financial services regulation is certainly an important topic in the current policy debate.¹⁰⁷ To date, the concern about the safety and soundness of the financial system has led to intrusive regulatory interference. However, developments in information technology, the proliferation of financial markets, the blurring distinction between banking and non-banking financial institutions and the continuous increment of new product innovations have put banking in a state of perpetual flux.¹⁰⁸ The key question is how to adapt the regulatory framework to the increasingly competitive environment of banking. Technology has transformed finance around the world at an unprecedented rate generating new opportunities and new risks. Consequently, financial regulators are required to develop new approaches to regulation, including the use of technology, to balance the benefits of innovation and economic development with the need for financial stability and consumer protection.¹⁰⁹ Prior to GFC of 2008 financial innovation was viewed positively and as a result laissez-faire deregulatory approaches to regulation was employed. However, the post crisis financial regulatory reforms were reverse of the prior approach. The post crisis regulatory changes combined with increasingly rapid technological change have stimulated the development of financial technology.¹¹⁰

The GFC challenged the dominant positive view of innovation in finance. However, innovation still matters and financial regulators are required to preserve stability, protect consumers and promote innovation.¹¹¹ Innovation can enhance market efficiency by reducing transaction and financial intermediation costs as well as provide new solutions to old problems such as financial exclusion, the quality of consumer decision-making, agency costs, and compliance costs.

¹⁰⁷ Boot, A. W. A., Milbourn, T. T., & Dezelan, S., “Regulation and the Evolution of the Financial Services Industry”, In A. M. Santomero, S. Viotti, & A. Vredin (Eds.), Challenges for Central Banking, (2001), (pp. 39-58). Massachusetts: Kluwer.p.1 available at: <http://dare.uva.nl>

¹⁰⁸ Ibid

¹⁰⁹ Dirk Zetsche/Ross P. Buckley/Douglas W. Arner and Janos Nathan Barberis, “Regulating a Revolution from Regulatory Sandboxes to Smart Regulation”, EBI Working Paper Series No.11, (2017) available at: <http://www.law.unsw.edu.au/research/faculty-publications>

¹¹⁰ Ibid

¹¹¹ Ibid

However, on the other hand, financial innovation can also bring new risks.¹¹² Thus, regulatory design and regulators are required to balance support for innovation with their core regulatory mandates of financial stability and consumer protection.

The meaning of the term regulation varies based on the context in which it is employed. In financial sector, regulation refers to a set of binding rules issued by a private or public body to regulate the financial sector actors.¹¹³ It also refers to a set of enforceable rules that restrict or direct the actions of market participants as a result altering the outcome of those activities.¹¹⁴ The financial sector regulatory framework comprises of a combination of the primary enabling legislation, secondary legislations issued pursuant to the enabling legislation, principles, rules and codes of conduct issued by regulators and guidance or policy directives issued by regulatory authority.¹¹⁵

The recent technological innovation and their pace of development pose a challenge to the regulators to regulate the e-banking system. Regulators face the challenge of keeping pace with the technological development and ensuring the adequacy of the regulatory framework to regulate the ever changing development.¹¹⁶ Moreover, making sure that the regulatory and supervisory frameworks enable technology users to execute their new and innovative business models without affecting customer protection, integrity of the financial markets and the overall stability of the financial system is another challenge.¹¹⁷

3.2. The Rationale of Regulating E-banking

As a result of technological advancement the structure of financial intermediation and financial service has changed and is being changed, however, the justification for governmental regulatory

¹¹²Zetsche et al, cited above at note 110, 9

¹¹³ Kenneth Kaoma Mwenda, Legal Aspects of Financial Services Regulation and the Concept of a Unified Regulator, World Bank Law, Justice, and Development Series, (2006), p. 5 available at: www.worldbank.org

¹¹⁴ Rodrigo A. Chaves and Claudio Gonzalez-Vega, “Principles of Regulation and Prudential Supervision: Should They Be Different for Microenterprise Finance Organizations”, Economics and Sociology Occasional Paper No 1979, (1992), The Ohio State University, p.4

¹¹⁵ Mwenda, cited above at note 9, p.5

¹¹⁶ Deloitte, FinTech Regulatory Challenges and Financial Crime Exposure, Issue 11/2018, p.4 available at www.deloitte.com

¹¹⁷ Ibid

intervention in the financial system is unlikely to change.¹¹⁸The main economic justification for government intervention through regulation is the existence of market failures.¹¹⁹ Market failures exist if markets do not work perfectly. Market works perfectly in case where there is perfect competition, there are markets for all goods with interaction between agents through prices, and all agents are fully informed. An absence of one of these elements leads to market failures. Market failures lead to inefficient allocation of resources in which welfare for the society as a whole can be hampered and necessitate regulation by the public sector.¹²⁰ Banks and other financial intermediaries are the most regulated sector than any other sectors of the economy. In microeconomic theory there is an ongoing debate about the reasons for regulation of banks and other financial institutions and the form regulation should take, but there is an agreement as to the fact that the sound functioning of the banking system is vital for macroeconomic performance and regulatory intervention is important.¹²¹

A primary objective of financial market regulation is ensuring macroeconomic stability.¹²² The banks and other financial institutions are at the heart of the economic system due to their risk sharing, liquidity provision, information processing, and payments facilitation services.¹²³ The importance of these services to the economy, the exposure of the financial institutions to varieties of risks, the need for consumer protection, and the need to avoid public panic about the financial institutions justifies regulation.¹²⁴The other objective of financial regulation is consumer and investor protection.¹²⁵ The increased diversity of financial instruments and larger number of financial institutions active in many markets has led to many gains. However, the more diverse and complex products and the changing markets conditions have made it more complicated to assure that consumers gain all the benefits from this diversity. The banking product and services delivery channels have changed quite a lot and many new players have

¹¹⁸ Mara J Nieto, "Reflections on the regulatory approach to e-finance", in BIS Papers No 7, Electronic finance: a new perspective and challenges, BIS Monetary and Economic Department, (2001), p.92 available at www.bis.com

¹¹⁹ G.E. Hebbink and H.M. Prast, Regulation and Banking: A Survey, (1998), Working Paper No. 565, De Nederlandsche Bank, Amsterdam p.4

¹²⁰ Ibid

¹²¹ Ibid

¹²² Nieto, cited above at note 119, p.96

¹²³ Solomon Abay, Financial market development, policy and regulation: the international experience and Ethiopia's need for further reform, (2011, unpublished, Dissertation University of Amsterdam, 2011), p.17 available at: (<http://dare.uva.nl>)

¹²⁴ Ibid

¹²⁵ Nieto, supra note 119 above, p.96

emerged making it harder for consumers to choose on a well-informed basis and necessitate regulatory intervention to protect the consumers.¹²⁶ In e-banking platforms protection of consumer's data security and privacy, the global character of e-banking services delivery channels, and the entrance of non-regulated new intermediaries in the provision of the services necessitate the intervention of financial regulator to protect the consumer.¹²⁷ The other objective of financial regulation is promoting Competition. Competition is an important driver of recent financial sector improvements and making the financial systems more open and contestable has generally led to greater product differentiation, lower cost of financial intermediation, more access to financial services, and enhanced stability.¹²⁸ Hence, all the justifications that necessitate the regulatory intervention in the financial sector are equally applicable to e-banking.

3.3. E-Banking Regulatory Consideration and Reform in Ethiopia

E-banking is generally an extension of traditional banking using the internet and other electronic delivery channels to deliver banking products and services. Hence, the existing laws, prudential bank regulations, and supervisory policies apply to e-banking activities.¹²⁹ The extension of the existing bank regulatory rules to e-banking is based on the justification that banking services have to be supervised irrespective of the medium used to deliver such products and service. However, in light of the technologically complex and rapidly evolving nature of the e-banking delivery channels bank regulators and supervisors are significantly challenged and additional, specialized supervisory guidance to address the issues and risks specifically posed by e-banking system is mandatory.¹³⁰ Amendments have to be introduced to laws or new regulations adopted to address specific risks and issues such as internet security, customer authentication and protection, data privacy and other issues such as technology outsourcing. The critical issue is determining the appropriate level of intervention through regulation and supervision to strike balance between safety of system and development of innovation. A successful balance of safety

¹²⁶ Stijn Claessens, Current Challenges in Financial Regulation, (2006 World Bank Policy Research Working Paper 4103), p.20 available at: www.worldbank.org

¹²⁷ Nieto, cited above at note 119 above, p.96

¹²⁸ Cleassens, cited above at note 127, p.96

¹²⁹ Basel Committee, cited above at note 2, p.8

¹³⁰ Ibid

and innovation can foster rapid growth whereas a more restrictive approach can lead to tepid growth.¹³¹

Financial sector regulator in a bid to facilitate the development of a safe, enabling environment for electronic delivery of banking services face a number of challenges.¹³² Understanding the technology that underpins e-banking services delivery mechanism is a primary challenge.¹³³ The intricacies of issues associated with e-banking involve highly technical language and concepts that are in many cases not easy to grasp and regulate. Even though electronic delivery of financial services presents an opportunity to harness the power of technology to move beyond the traditional arrangement of financial intermediation, understanding the technology is not an easy task. Moreover, understanding the effects of utilization of digital channels to deliver banking products and services on existing regulatory frameworks is not an easy task.¹³⁴ It requires extra effort on the part of the regulator to assess the effect the technological advancement have on the exiting regulatory rules and undertake necessary adjustments and amendments to balance the benefits from the development and the risks it poses. Anticipating the evolution of the technology and the related issues is other challenge. The regulator is required to be familiar with new digital services and plan ahead so that the regulatory framework keeps pace with technological evolution.¹³⁵ Regulating the provision of financial services by new entrants and the overlapping of regulatory power and competence is another challenge. Regulators often lack financial or technical resources to adequately oversee and regulate new types of services often offered by new entrants in the financial service and regulatory capacity is thus another challenge.¹³⁶

Hence, designing an appropriate regulatory framework to regulate e-banking system is critical. The goal of e-banking regulation is to strike a balance between safety and openness in the system. Electronic finance generally, is dramatically changing the structure and nature of

¹³¹ USAID, Digital Finance for Development, A handbook for USAID staff, (2013), p.23 available at: www.usaid.org

¹³² Ibid

¹³³ USAID, cited above at note 132, p.23

¹³⁴ Ibid

¹³⁵ Ibid

¹³⁶ Ibid

financial services.¹³⁷ Electronic finance will lead to much lower costs and greater competition in financial services either by the entry of new participants outside today's financial sector and greater competition among incumbent financial service providers.¹³⁸ Thus, in order to benefit from the opportunities presented by electronic finance in general enabling regulatory environment that facilitates its smooth development has to be put in place.¹³⁹ An enabling regulatory approach permits market players to explore different arrangements and products in order to provide an environment in which innovation and growth are encouraged.¹⁴⁰ The substantive content of the enabling regulation requires putting in place regulatory rules that are proportionate to the risks posed by the regulated entity and activities. Proportionate regulatory rules takes into consideration the costs to the regulator, the institutions, and the consumers are proportionate to the risks being addressed and as well as the anticipated benefits.¹⁴¹

Hereunder, major areas of regulatory consideration and intervention necessary to help the expansion of e-banking system and formulate an enabling regulatory design would be considered. The e-banking regulatory rules and laws of Ethiopia would be assessed to uncover whether or not there is a need for regulatory reform. E-banking is a generic term that encompasses different sets of electronic delivery of banking products and services, nevertheless, all e-banking delivery channels utilized to deliver e-banking products and services does not present exactly similar regulatory issues and concerns. The objective of this research work is to pinpoint the regulatory consideration that is common and applicable to all categories of e-banking system irrespective of their peculiarities and assess if there is a need for regulatory reform under Ethiopian law. Hence, the e-banking regulatory framework in Ethiopia common to all e-banking delivery channels are assessed without divulging in a special regulatory issues and concerns that different types of e-banking delivery channels pose and forward regulatory reforms that has to be undertaken to help the expansion of the e-banking system in Ethiopia.

¹³⁷ Stijn Claessens/ Thomas Glaessner and Daniela Klingebiel, Electronic Finance: A New Approach to Financial Sector Development?, (2002 World Bank Discussion Paper No.431), p.3 available at www.worldbank.org

¹³⁸ Ibid

¹³⁹ Claessens et al, cited above at note 138, p.3

¹⁴⁰ Ross Buckley, Jonathan Greenacre, and Louise Malady, The Regulation of Mobile Money in Malawi, 14 Wash. U. GlobalStud. L. Rev. 435 (2015), p.444 available http://openscholarship.wustl.edu/law_globalstudies/vol14/iss3/7

¹⁴¹ Ibid

3.3.1. Telecommunications Regulation and E-banking

Telecommunications regulation for both fixed and non fixed lines is a key area for the expansion of e-banking.¹⁴² It is critical for telecommunications laws and regulations to align with financial laws and regulations.¹⁴³ The telecommunications regulatory framework shall not protect the incumbent providers and allow private firms to enhance connectivity ranging from fixed lines to mobile and satellite services.¹⁴⁴ In the conventional setting the role of the telecommunications regulator in the financial system is indirect. It involves ensuring the reliability and security of the communications infrastructure that connects financial institutions to their customers and to each other. However, with the rise of e-finance especially mobile banking and mobile payment services the telecommunication regulator is highly involved in the platform. Hence, there is an overlapping of the traditionally clear boundary between regulation of telecommunications services and regulation of financial services. Depending on the business model employed by the service providers; telecommunications regulators may assume the responsibility for overseeing or facilitating these emerging services.¹⁴⁵

Telecommunications regulators are required to understand the type of e-banking services including m-banking systems that are introduced in their markets and evaluate the models of service delivery that may or may not be permitted under the telecommunications regulatory framework in coordination with and participation of the financial regulator.¹⁴⁶ Telecommunication regulation shall be designed in such a way that it improve licensing of competitive operators, enhance mandatory interconnections and unbundle public switched telephone networks, implement independent regulatory supervision, and implement proper pricing regulations. Improving access to telecommunications for a larger portion of the population is especially important in emerging markets.¹⁴⁷

The telecommunications sector in Ethiopia is a public monopoly with no competitor in the field and the state owned Ethio-telecom, renamed several times in its long history, has been the only

¹⁴² Cleassens et al, cited above at note 138, p. 24

¹⁴³ USAID, cited above at note 132, p.31

¹⁴⁴ USAID, cited above at note 132, p.31

¹⁴⁵ ITU, The Regulatory Landscape for Mobile Banking, GSR Discussion Paper, (2011), p.11 available at www.itu.int

¹⁴⁶ Ibid

¹⁴⁷ Cleassens et al, cited above at note 42, p. 24

telecommunications network operator and provider of telecommunications services.¹⁴⁸ Owing to the role telecommunication in the economic and social transformation the Ethiopian government has made development of telecommunications one of its strategic priorities.¹⁴⁹ The telecom sector is regulated by various proclamations, regulations and directives. The government of Ethiopia has been undertaking different reforms to modernize the telecom sector and recently announced that it is going to privatize the telecommunication sector with other major public enterprises and the privatization advisory committee has been established by the Prime Minister and the privatization process is in progress.

Even though the telecom sector is public monopoly the private sector can participate in tele centers or resale service.¹⁵⁰ By obtaining a license from the MCIT and signing service delivery agreement with Ethio-telecom the private sector is allowed to participate in the resale of some telecommunication services such as airtime vouchers, fax and Internet services through cyber cafés and to provide value added services. The types of value added services allowed to be provided by the private sector include short messaging services (SMS), payment transaction services, entertainment services, location based services, Call Center Services, and virtual internet services.¹⁵¹ Licensees are also obliged to interconnect their equipment and systems only with Ethio-Telecom's infrastructure or network, use equipments approved by the MCIT, and not to provide any service other than the services they are licensed for.

The telecom sector is central to the economic development of the country and it provides the necessary connectivity among the different sector of the economy. The financial sector especially the banking sector depends on the service of the telecom company to automate its system and to deliver e-banking products and services of different kinds. The reforms being undertaken by the Ethiopian government to modernize the telecom sector including the privatization effort is a good development. However, to provide a quality service to the ever

¹⁴⁸ Kinfe Michael Yilma and Halefom Hailu Abraha, "The Internet and Regulatory Responses in Ethiopia: Telecoms, Cybercrimes, Privacy, E-commerce, and the New Media", Mizan Law Review vol.9 no.1, (2015), p.118

¹⁴⁹ Federal Democratic Republic of Ethiopia, Ministry of Finance and Economic Development, Growth and Transformation Plan (GTP) 2010/11-2014/15 , 2010, p. 75

¹⁵⁰ Telecommunications (Amendment) Proclamation, 2002, article 7(3), proclamation No. 281, Neg. Gaz. Year 8 No. 28

¹⁵¹Ministry of Communications and Information Technology, Value Added Services License Directive, Directive No. 3/2011, article 6

increasing demand for better connectivity it is imperative that the telecom sector is further modernized and build strong capability. In this case allowing the private sector invest in the telecom sector may help to make the sector more efficient and effective. The e-banking system in Ethiopia is basically tied to the incumbent banks and the power to license new entrants to the banking sector is the power of the NBE and there is no extra burden on the telecom regulator in this regard. The role of the telecom regulator in Ethiopia is the traditional responsibility of providing the necessary infrastructure for reliable and secure connection. However, as the utilization of technology in the financial sector is fast evolving it is imperative that the telecom sector is further modernized to be able to support the ever increasing demands by the financial sector.

3.3.2. Regulation of Security of E-banking

Electronic commerce generally integrates communications, data management, and security services in order to enable business applications within different organizations to automatically interchange information.¹⁵² E-banking is the use of a computer system to retrieve and process banking data such as statements, transactions details, and to initiate transactions like payments, transfers, requests for services from a bank or other financial services provider remotely via telecommunications network. E-banking increases banks dependence on information technology thereby increasing the technical complexity of many operational and security issues.¹⁵³ The internet is ubiquitous and global by its nature as well as open network accessible from anywhere in the world by unknown parties with routing of messages through unknown locations and via fast evolving wireless devices. Hence, security controls, customer authentication techniques, data protection, audit trail procedures, and customer privacy standards are of paramount significance.

E-banking delivery channels create new security issues for banks with respect to confidentiality and integrity of information, non-repudiation of transactions, authentication of users and access control.¹⁵⁴ Security is a constraint and a concern for the providers and consumers of e-banking

¹⁵² Zachary B. Omariba, Nelson B. Masese & G. Wanyembi , Security and Privacy of Electronic Banking, IJCSI International Journal of Computer Science Issues, Vol. 9, Issue 4, No 3, (2012), p.432 available at: www.IJCSI.org p.432

¹⁵³ Ibid

¹⁵⁴ BIS, “Electronic Banking Group Initiatives and White Papers”, Basel Committee for Bank Supervision, (2001), p. 17 available at www.bis.com

facilities and serious operational risks and potential liabilities are associated with security breaches in the operation of e-banking system. The extensive use of information technology by banks necessitates the need to assure the confidentiality and integrity of information to maintain competitive edge, cash-flow, profitability, legal compliance and commercial image.¹⁵⁵ However, information systems and the networks of the banking organizations face security threats from a wide range of sources including computer assisted fraud, espionage, sabotage, vandalism.¹⁵⁶ The sources of damage such as the computer viruses, computer hacking and denial of service attacks have become more common, more ambitious and increasingly sophisticated in the networked environment. Thus, it is imperative that each technology user especially banks put in place adequate security controls to ensure system accessibility, maintain data integrity and implementation of safeguards against all security threats to guarantee information and information systems security across the organization.¹⁵⁷

In e-commerce platforms generally, information security consists of three main elements of confidentiality, integrity, and availability and they are widely used benchmark to evaluate the information system security. All these three components of security may be affected by purely technical issues, natural phenomena, or accidental or deliberate human causes.¹⁵⁸ Confidentiality refers to limitations of information access and disclosure to authorized users and preventing access by or disclosure to unauthorized users.¹⁵⁹ It is an assurance that information is shared only among authorized persons or organizations and it is highly intertwined to the broader concept of information privacy, i.e., limiting access to individuals' personal information. Authentication methods such as user IDs and passwords that identify user, limitation on identified user's access to the data system's resources and protection against malware, spyware, spam and other attacks are intended to protect the confidentiality of information.¹⁶⁰

The second element of information security is integrity and it relates to ensuring the trustworthiness of information resources. It is used to ensure that information is sufficiently

¹⁵⁵ Tejinderpal Singh, Security and Privacy Issues in E-Banking: an Empirical Study of Customers' Perception, Macro Research project, (2013), Indian Institute of Banking And Finance, p.25

¹⁵⁶ Ibid

¹⁵⁷ Singh, cited above at note 155, p.26

¹⁵⁸ Omariba et al, cited above at note 152, p.439

¹⁵⁹ Ibid

¹⁶⁰ Ibid

accurate for its purposes.¹⁶¹ The information is required to be authentic and complete. The third element, availability refers to the availability of information resources. The information system is responsible for delivering, processing, and storing of information and it is vital that it is accessible when needed, by those who need it.¹⁶² In order to tackle the problem of enhanced security challenges posed by e-banking, it is imperative that the banking organization establish appropriate authorization privileges and authentication measures, logical and physical access controls, adequate infrastructure security to maintain appropriate boundaries and restrictions on both internal and external user activities and data integrity of transactions, records and information.¹⁶³ Moreover, a clear audit trail has to be put in place for all e-banking transactions and appropriate measures to preserve confidentiality of key e-banking information commensurate with its sensitivity.¹⁶⁴

The risk of accidental or deliberate disruption to financial institutions' IT systems has long been recognized by the industry and regulators. However, for a long time it was treated as one of several sources of operational risk facing financial institutions employing electronic means to avail their products and services.¹⁶⁵ It was not until early this decade that cyber risk per se started to become the focus of the financial industry and regulators, following a string of cyber attacks against governments and businesses in different parts of the world. The number of cyber attacks against the financial services industry has multiplied.¹⁶⁶ Cyber risk has a number of characteristics that make an assessment of the likelihood of its occurrence and cost it entails challenging.¹⁶⁷ The major challenges are the means of cyber attacks vary widely across firms and geographies, ranging from denial-of-service (DoS) attacks to attacks on ATMs, breaches of firewalls, internal databases or servers, and web application attacks; Vulnerability to cyber risk

¹⁶¹ Ibid

¹⁶² Ibid

¹⁶³ Basel Committee, cited above at note 31, p. 17

¹⁶⁴ Ibid

¹⁶⁵ Dimitri Demekas, "Emerging Technology-Related Issues in Finance and the IMF-A Stocktaking", Independent Evaluation Office Background Paper of IMF, (2018), p.2 available at: www.imf.org

¹⁶⁶ The most prominent attacks include disrupting money transfers and erasing computer files in three Korean banks in 2013; hacking trading terminals in a Russian bank in 2014 and the execution of fraudulent high-value dollar trades; and compromising of a SWIFT software program installed on bank servers at the Central Bank of Bangladesh in February 2016.

¹⁶⁷ Id, p.3

arises not only from weaknesses in an internal system of the firm but also from those of its clients, suppliers or service providers, and infrastructure providers. Moreover, often the motives and capabilities of the perpetrators are not identified and the degree of risk they represent are difficult to understand and there are no comprehensive data on cyber attacks and their impact, rendering risk aggregation and the estimation of losses extremely difficult. On part of the individual firms there is also no incentive to reveal the scope and nature of breaches.¹⁶⁸

There are different opinions on whether to regulate cyber risks and how to regulate it.¹⁶⁹ On one hand, there is the view that evolving nature cyber risk is not amenable to specific regulation and that cyber issues are better handled with existing regulations relating to technology and operational risk. The other view is that, independent regulatory structure is required to handle the unique nature of cyber risk and the growing threat of cyber risk in digitalized financial sector.¹⁷⁰ Apart from the theoretical debate with increasing frequency and impact of cyber security incidents policy-makers and regulators are exploring a variety of policies and tools to mitigate it.

There are different initiatives under way internationally to regulate the risks posed by cyber security breaches. For example, in October 2016 the G-7 published the Fundamental Elements of Cyber security for the Financial Sector outlining some broad cyber security practices for public entities, public authorities, and financial firms.¹⁷¹ The elements serve as the building blocks upon which an entity can design and implement its cyber security strategy and operating framework, informed by its approach to risk management and culture. The elements also provide steps in a dynamic process through which the entity can systematically re-evaluate its cyber security strategy and framework as the operational and threat environment evolves. Public authorities within and across jurisdictions can also use the elements as guide to their public policy, regulatory, and supervisory efforts.¹⁷²

In the Ethiopian context the mobile and agent banking directive identifies the possible security risk that may arise in the operation of the system with regard to technology system by identifying

¹⁶⁸ Ibid

¹⁶⁹ Almansi, Acquiles A., “Financial Sector’s Cyber security: Regulations and Supervision”, FCI Insight, Washington D.C. World Bank group, (2018) available at: www.documents.worldbank.org

¹⁷⁰ Ibid

¹⁷¹ Group of Seven (G7), G7 Fundamental Elements of Cyber security for the Financial Sector, (2016), Available at: https://www.ecb.europa.eu/paym/pol/shared/pdf/G7_Fundamental_Elements_Oct_2016.pdf?69e99441d6f2f131719a9cada3ca56a5G-7_elements

¹⁷² Ibid

the sources of possible security risks.¹⁷³ Possible security risks may emanate from users lack of awareness such as when the user fails to observe security requirement including how to utilize PIN code and other security features. The security risk may also arise from infrastructure and Software applications failure to function properly and normally. Communication risk is also another security risk that involves problems that arise in relation to communication protocol risk, data storage risk and system availability is also another source of security risk. Moreover, security risks may also emanate from agent and third party services providers, business discontinuity and system interface.¹⁷⁴ Hence, in order to avert the possible security risks the directive requires the financial institution to put in place technology risks management programs and continuously sustain and regularly update and enforce the security requirement from time to time. However, this directive is not sufficient to govern all the security concern in the e-banking framework for it specifically deals with mobile and agent banking and it cannot govern the security concern in other e-banking delivery channels.

The substantive content of the directive leaves it up to the financial institution to develop a security risk management framework and does not provide a guideline that will help in the design of the risk management and as a consequence it makes exercising regulatory and supervisory power of the NBE tricky. Each financial institution is free to adopt a risk management program it thinks fit and that will create a difficult situation for the development of harmonized risk management practice in the field and it is recommendable that the NBE apart from prescribing the setting up of security risk management; provide a guidelines that governs the issues in system security in e-banking as financial regulators in other jurisdictions do.

Basically, designing security risk management guidelines is a challenging task. The technology is evolving fast and so is the capability of the infiltrators to bypass the security mechanisms and inflict harm. On top of the technological challenge the capacity of the NBE to regulate and supervise is an issue that requires extra consideration. The bank supervision directorate of the NBE entrusted with the duty to supervise the banking sector including e-banking system is composed of business graduates and it is not staffed with IT professions to help it undertake its duties properly.¹⁷⁵ It is the duty of the government to enhance the regulatory capacity of the

¹⁷³ See article 7 of the Mobile and Agent Banking Directive

¹⁷⁴ Ibid

¹⁷⁵ Interview with Ato Getu Molla, Senior Bank Examiner at NBE, May 30, 2019

financial regulator by equipping it with capable man power and sufficient technological capability. It is imperative that the regulatory capability of the NBE is enhanced to enable it exercise its regulatory power in the ever changing financial sector especially the issue of cyber security in the financial sector. Apart from the rules issued by the NBE there are other policies, laws and regulations that have an implication on the security regulation in the e-banking system.

There are host of policies, laws and regulations of the country that are relevant in ensuring the security of the information system in general including the e-banking platforms. In 2009, the Ethiopian Government adopted national Information Communication Technology Policy and Strategy that has an implication on the cyber security. The ICT policy recognizes, among other things, the need for the promotion of cyber security and resilience of the network infrastructures. ICT security is one of the strategic objectives of the policy document.¹⁷⁶ The growth and transformation plan (here after GTP) formulated by the government in 2010 also recognizes the development of ICT and telecommunication infrastructure as the strategic pillar of the program. In furtherance of this strategic pillar, the GTP clearly spells out that the government is committed to ensure the security of ICT service and protect the systems from cyber-crime by creating appropriate legal and institutional framework.¹⁷⁷ Hence, these policies will have an implication on the regulation of security of the e-banking platforms.

Apart from the adoption of legal and policy frameworks the establishment of robust and specialized institutions is critical and the government has established the institution dedicated to ensuring cyber security. Information Network Security Authority (INSA) is established to coordinate the regulation of cyber security issue in Ethiopia.¹⁷⁸ INSA is delegated with the power to ensure that information and computer based key infrastructures are secured and serve as enabler of national peace, democratization and development programs. The National Payment Law, Computer Crime Proclamation, the Criminal Code, Telecom Fraud Laws have in one way or another have an implications on the regulation of cyber security issues.

¹⁷⁶ FDRE, National Information and Communication Technology Policy, (2009), see strategy 3.4.

¹⁷⁷ GTP, cited above at note, 135, p.77

¹⁷⁸ Information Network Security Agency Re-establishment Proclamation, 2013, Proclamation 808/2013, Neg. Gaz. Year 20 No.6, article 6

3.3.3. E-banking and Contract Enforcement

The banker-customer relationship is a contractual relationship.¹⁷⁹ It is created upon formation of a contract and continues to exist as long as the contract is in effect and comes to an end upon the termination of the contract.¹⁸⁰ Because the relationship is contractual, it is governed by the law of contract. The relationship consists of an aspect that is governed by general contractual provisions as any kind of contractual relationship and an aspect that is governed by the special contractual provisions that is applicable only in relation to specific transactions in this context, the banking services.

Bank customer relationship whether in the traditional banking service or e-banking is a contractual relationship. Hence, e-banking involves a conclusion of a contract for delivery banking services through electronic means. A contract is a product of exchange of promise backed by judicial enforcement. Judicial enforceability is the immediate result of the legality of a contract. Hence, e-banking involves the formation of e-contract. Electronic contract is an enforceable promise exchanged through electronic communications.¹⁸¹ Formation and execution of contracts by electronic communications yields unfamiliar practice to the conventional contract laws. Declaration of consent, time of contract formation, formality requirement, and variation of contracts, delivery of notice, effect of electronic contracts, admissibility of electronic records and the principle of Parole Evidence Rule cannot fully converge with conventional law of contract.¹⁸²

Electronic Contracts (hereafter e-contracts) are an integral part of electronic commerce. E-commerce is the use of electronic communications and digital information processing technology in business transactions to create, transform, and redefine relationships for value creation between or among organizations, and between organizations and individuals through a computer facilitated network. E-contract refers to a contract mediated by electronic networks with parties in absentia. It is the computerized facilitation or automation of a contract.¹⁸³ E-contracting is

¹⁷⁹ Plato-Shinar, Ruth (2013) "The Banking Contract as a Special Contract: The Israeli Approach", *Touro Law Review*: Vol. 29: No. 3, Article 13. Available at: <http://digitalcommons.tourolaw.edu/lawreview>

¹⁸⁰ Ibid

¹⁸¹ Gebrehiwot Entehawu, *The Legal Framework for Electronic Contracts in Ethiopia With Special Emphasis on General Contract Law*, (2013, unpublished Senior, Thesis AAU School of Law), p. 12

¹⁸² Ibid

¹⁸³ Ibid

computer aided contractual undertaking with all the features of a conventional contract. Hence, e-banking is an e-contract that relates to the provision of banking products and services using computer driven communication and it is a sub-set of e-commerce. Laws governing electronic commerce generally create an enabling environment for e-banking by according equal legal weight to electronic and paper based transactions. Common rules that govern the creation and reliance on digital signatures, the equivalence of digital with paper documents for the sake of legal matters, and the permissible use and protection of digital data are important prerequisite for the expansion of the e-banking services.

Uncertainty about the legal framework governing e-commerce inhibits both consumers from purchasing products or services over the internet, and companies from entering into the electronic market place.¹⁸⁴ Legal validity and enforceability of electronic contracts is also a preliminary condition for furtherance of electronic commerce. E-contracts raise a question regarding the validity and enforceability of contracts which are formed electronically without the parties having direct personal contact. E-contracts are alleged for creating uncertainty on their validity and enforceability.¹⁸⁵ The unique features surrounding e-contracts undermine application of the principles of conventional contract laws and necessitate statutory declaration of validity of contract formed through electronic communication methods.

Under the Ethiopian legal systems there are different laws that statutorily declare the validity of electronic communications to form a contract and recognize electronic records as having equal value with paper records. The National Payment System Proclamation No.718/2011 recognizes the validity of electronic records with regard to the payment system. The law promulgates where any law provides that information or any other matter shall be in writing, such requirement shall be deemed to have been satisfied if such information or matter is rendered or made available in an electronic form and accessible so as to be usable for subsequent reference.¹⁸⁶ The law recognizes the validity of electronic records in relation to payments system in the event the law requires written formality. The Electronic Signature Proclamation was enacted with the objective to create conducive legal framework to promote electronic commerce and electronic government

¹⁸⁴UNCTD, Developments and Main Issues in Electronic Commerce and Information and Communications Technologies, Background Paper, (2003), Genève, p. 9

¹⁸⁵ Gebrehiwot, cited above at note 182 , p.32

¹⁸⁶ Article 21(1) of the National Payment System Proclamation

service and provide legal recognition to the exchange of electronic messages and determine the rights and obligations of participating parties.¹⁸⁷ Promotion of trust in the electronic transactions, verification of participating parties, authentication of messages and ensuring non-repudiations are all the objectives the law intends to achieve. The law recognizes the legal validity of electronic messages as well as the evidentiary value of the same.¹⁸⁸

The electronic signature proclamation will have the effect of enhancing the trust in the electronic commerce ecosystem including e-banking. It gives recognition to electronic message equally with paper based undertaking of transaction. However, the effective implementation of the law requires complimentary legal and policy frameworks such as a national e-commerce law and national electronic commerce policy. Recently, the Ministry of Innovation and Technology has started drafting e-commerce law and the enactment of the law will greatly contribute to the expansion of e-commerce in the country, which will also have an implication on the e-banking system. The expansion of e-commerce and being able to conduct hosts of transactions through electronic means necessitate conducting payment for it through e-banking plat forms and contributes to the expansion and sophistication of e-banking system. Hence, the contractual enforcement framework in Ethiopia is enabling to the expansion of e-banking platforms by giving due recognition to e-communication and it enhance the trust in the system. But, to fully benefit from the opportunities presented by e-banking it is mandatory that e-commerce flourish.

3.3.4. Consumer Protection in E-Banking

Public trust is crucial for the development of any country's financial sector and having effective access to suitable financial products and services has an important impact on the financial and general welfare of a country's citizens. The vast majorities of consumers are at a significant disadvantage in business relations with any financial service provider and require appropriate and comprehensive protection. Over the past decade financial consumer protection has become an increasingly mainstream priority.¹⁸⁹ A strong consumer protection regime is key to ensure expanded access to financial services that benefits consumers, enable well-informed decisions

¹⁸⁷ Electronic Signature Proclamation, 2018, Proclamation No.1072, Neg. Gaz., Year 24, No 25, the preamble

¹⁸⁸ Ibid, see article 5(1)

¹⁸⁹ World Bank Group, Good Practices for Financial Consumer Protection, (2017), p.1 available at: www.worldbank.org

making on how best to use financial services, build trust in the formal financial sector, and contribute to healthy and competitive financial markets.¹⁹⁰ The global financial crisis of 2008 highlighted the importance of financial consumer protection for the long-term stability of the world financial system.

E-banking and related innovations have made it possible to stratify customers through electronic customer relationship management and customized financial services. However, unless carefully regulated these developments also create risks for consumers. In an increasingly digital environment for the provision of financial products and services with the potential to support greater financial inclusion and inclusive growth, the need for effective financial consumer protection is more important than ever. At the same time, the policies and approaches developed and adopted by financial consumer protection authorities need to evolve and adapt in line with the changing environment of banking.¹⁹¹ With the growth of financial markets and rapidly expanding financial inclusion, concerns over consumer education, protection and recourse in financial services have received increased attention.¹⁹² The assumption is that general consumer protection measures and consumer education do not offer sufficient consumer protection in financial services and that dedicated measures and regulatory institutions are required.¹⁹³ The need for tailored consumer protection scheme in the financial sector is justified on the grounds of first, the complex nature financial products made it difficult for consumers to understand and choose between products. Secondly, the lengthy terms and conditions for financial services often coupled with multiple exclusions makes appreciating the limitations and the risks associated with a product cumbersome. Finally, the marketing and sales practices of intermediaries and service providers may cause vulnerable consumers to purchase products they do not need which may have impact on consumers' financial health.¹⁹⁴

¹⁹⁰ World Bank Group, cited above at note 190, p.1

¹⁹¹ OECD, G20/OECD Policy Guidance on Financial Consumer Protection Approaches in the Digital Age,(2018) p.7 available at: www.oecd.org

¹⁹² Zulaikha Brey, Stephen Chisadza, Astrid Ludin & Matthew Stern, "Consumer protection in SADC", Making Financial Markets Work for the Poor Report, (2016),

¹⁹³ Ibid

¹⁹⁴ Ibid

All financial service providers offering products and services to customers shall be subject to a law or set of laws that establishes minimum and specific standards for protecting consumers.¹⁹⁵ Two broad sets of legislation govern financial consumer protection. On the one hand, various financial sector laws and regulations contain provisions on consumer protection covering the operations of financial service providers and the relationships between financial service providers and their clients. On the other hand, consumer protection and fair competition legislation defines the rights of consumers of various goods and services often including financial products and services. Recently, a number of countries added new legislative acts dealing specifically with consumer protection within financial services in a comprehensive manner.¹⁹⁶

Moreover, to address the specific issues relating to the consumer protection in the consumption of financial products and services countries generally follow two broad approaches.¹⁹⁷ The first approach is laying down specific provisions covering financial products and services into the general consumer protection law. The second is to issue a dedicated law to address financial consumer protection issues.¹⁹⁸ The ideal option is putting in place legal provisions that deal specifically with consumer protection issues in the financial sector and to determine the authority responsible to enforce it. Because it will enable address the concerns specific to the financial sector consumer protection and establish clear line of responsibility to address consumer protections concerns.

Apart from the legal framework for consumer protection the institutional arrangements and mandates of the authority (or authorities) in charge of implementing it is very important. The authority shall have legal powers to issue binding regulations for financial consumer protection, as well as guidelines or other instruments under these regulations; and implement and enforce the application of the financial consumer protection legal and regulatory framework.¹⁹⁹ Institutional structures for financial consumer protection oversight and enforcement are a product of

¹⁹⁵ World Bank Group, cited above at note 190, p.7

¹⁹⁶ World Bank Group, Global survey on Consumer Protection and Financial Literacy; oversight framework and practices in 114 Economies, (2014), p.6, available at: www.documents.worldbank.org

¹⁹⁷ Ibid p.7

¹⁹⁸ Ibid

¹⁹⁹ World Bank Group, cited above note 190, p.11

interaction between the consumer protection and financial supervision oversight structures and vary greatly among countries. Irrespective of the institutional arrangement the consumer protection authority shall have clear and objectively defined responsibilities and appropriate governance; operational independence; accountability for their activities; adequate powers; resources and capabilities; defined and transparent enforcement framework; and clear and consistent regulatory processes in handling its function.

In the Ethiopian context the different laws on the financial regulation and the general consumer protection laws are pertinent laws in the protection of financial services consumers including e-banking service users. The prudential financial regulation and supervision rules regulate the conditions of access to the market that are intended to prevent the emergence of entities with doubtful reputation or without financial capacity to operate and control the risks associated with financial activities, corporate governance and internal control systems, conduct-of-business rules, and methods of supervision.²⁰⁰ Hence, financial regulatory rules have consumer protection consideration. Thus, the financial regulations laws, rules and principles in the financial sector regulatory framework of the country have consumer protection implications including the users of e-banking services. Hence, the financial regulator by protecting the financial sector from different kinds of instability by employing different regulatory mechanisms intends to protect the interest of the consumer. Specifically, Trade Competition and Consumer Protection Proclamation (here after TCCPP) governs consumer protection issues in all fields of business activities including banking.²⁰¹ Trade Competition and Consumers Protection Authority is an institution delegated with the function of protecting consumers in Ethiopia. The authority is an autonomous federal body having its own legal personality. The authority among other things have the power take a measure to increase market transparency, public awareness on the issue of consumer's protection and to protect consumers from unfair practices of business persons.²⁰² However, there is a concern as to the suitability of general consumer law to effectively protect the financial service consumers specially in the case of e-banking.²⁰³ The general consumer protection may

²⁰⁰ Chaves and Vega, cited above at note 115, p.4

²⁰¹ Trade Competition and Consumers' Protection Proclamation, 2013, Proclamation No. 813/2013, Neg.Gaz. Year. 20 No. 28, Article 4

²⁰² see article 30 of the TCCPP

²⁰³ Ashenafi Lemecha Moti, Consumers and Third Parties Protection under the National Payment System Proclamation No.718/2011, (2017, Unpublished, Senior Thesis AAU School of Law), p. 23

have systems, processes and infrastructure for handling complains used for a broad range of products and services. But these agencies also generally do not have expertise in financial sector issues. Lack of expertise about the financial sector by the general consumer protection authority leaves a gap in the effort to strengthen the financial consumer protection scheme. Hence, the institution arrangement for financial service consumer protection needs to be reconsidered.

In addition to the legal framework and institutional set up for consumer protection in financial services generally and in the e-banking context in particular the following issues are critical aspects of the consumer protection framework. The disclosure and transparency; fair treatment and business conduct; Data protection and privacy; and Dispute resolution mechanisms are the essential elements of the consumer protection regulatory framework. Hence, even though these elements are addressed within the legal framework and institutional set up due to their impact on the customer protection brief look at them is very important.

i. Disclosure and Transparency

Requirements relating to disclosure and transparency in terms of financial products and services are a fundamental part of most financial consumer protection regimes.²⁰⁴ Digital developments provide opportunities for policy makers to improve disclosure requirements based on a better understanding of consumer decision-making, and explore alternatives which may prove more effective.²⁰⁵ Consideration of disclosure requirements is also relevant to the issue of data privacy in terms of how effectively privacy policies governing the use, collection, sharing and storage of a consumer's personal data are disclosed. The consumer has to be able to know the details of a financial transaction entered into and details of the account over time to make informed decisions and demand recourse in a case of wrongdoing²⁰⁶ Appropriate information should be provided at all stages of the relationship with the customer including standardized pre-contractual disclosure practices where applicable and the possibility of comparisons between products and services of the same nature.²⁰⁷ Disclosure by itself as a consumer protection tool has a limitations due to people not being able or inclined to read or understand lengthy or complex disclosure documents

²⁰⁴ OECD, cited above at note 192, p.24

²⁰⁵ Ibid

²⁰⁶ World Bank Group, cited above at note 197, 12

²⁰⁷ Ibid

and effective monitoring of compliance with disclosure standards are very important to effectively protect consumers.

TCCPP promulgates the consumer has the right to get sufficient and accurate information or explanation as to the quality and type of goods and services he purchase and imposes an obligation of disclosure on the business person.²⁰⁸ It provides that any business person upon request by consumer relating to goods or services he/she sells should satisfactorily disclose information requested by the former. Hence, e-banking service provider is duty bound to disclose information to the service user about the essential features of the product and services. National Payment System Proclamation also stipulates that any issuer of payment instrument is under obligation to prepare clear and standard sample terms and conditions, in relation to electronic fund transfers and stored value cards, applicable to all its customers in a similar manner and make it available for their review and possible agreement.²⁰⁹ Payment instrument issuers may be bank or other authorized issuer who avails payment instrument, whether tangible or intangible, that enables a person to obtain money, goods or service or to otherwise make payment or transfer money. Thus, financial institutions who introduce e-banking products and services use in the payment system is duty bound to disclose information about the product and services.

The Agent and Mobile Banking Directive requires the financial institution delivering mobile and agent banking to provide a mandatory disclosures of terms and conditions, risks and responsibilities of the customers and service providers to the mobile and agent banking user.²¹⁰ Thus, the mobile and agent banking provider is required to mandatorily disclose the terms and conditions of use, the risks involved, and attendant responsibility at the time of making the service available to the users. Generally, the disclosure rules dispersed in different laws are relevant in establishing disclosure and transparency in the e-banking framework in the country. However, the rules are fragmented and govern the different aspects of e-banking platforms and have to be harmonized and provided in comprehensive manner for easy access for all the concerned parties. The contentious issue of suitability of general consumer protection to financial service consumers especially regarding transparency and disclosure has to be addressed.

²⁰⁸ See article 14(1) of TCCPP

²⁰⁹ See article 10 of NPSP

²¹⁰ See article 12(5) of the Mobile and Agent Banking Directive

ii. Fair Treatment and Business Conduct

Balanced rules regarding contractual terms and conditions, product suitability, product regulation, and fair practices, have to be in place in order to ensure that consumers are treated fairly and offered a product or service appropriate for them.²¹¹ The objective of these regulatory rules is to reduce abuse of dominant position by financial service providers relative to consumers with respect to contractual terms and conditions dictated by the provider. Average consumers are usually unable to identify or fully understand contractual terms and conditions that may be detrimental to their interest and in limited instances where consumers are able to do so they are unlikely to negotiate different terms with the financial service provider. Hence, regulation and supervision should be used to curb patently unfair terms and conditions to the consumers.²¹² Besides having terms and conditions in consumer agreements that are fair, financial service providers also need to ensure that their relationships with consumers are fair, just, and honest and avoid disrespectful, discriminatory, or abusive practices.

Different laws of Ethiopia regulate the fair treatment in business dealings including e-banking contracts and conduct of business. The TCCPP does not clearly regulate the fair treatment of consumer but it contains a provision intended to protect the consumer against disrespectful and abusive practices.²¹³ Even though protection against disrespectful and abusive practices is one aspect of consumer protection it does not deal with the substantive element of the relationship and the general consumer protection law of Ethiopia falls short in this regard. The Mobile and Agent banking Directive provides that there has to be transparency in pricing products and services offered through mobile and agent banking. Thus, it gives an impression that the pricing mechanisms has to be transparent and indirectly it has an implication that it has to be fair, unless it is fair it cannot be transparent. Furthermore, the general contract rules under the Civil Code are also worth mentioning here. By the virtue of article 1676 sub article one of the Civil Code the general provisions of the contracts are applicable to all contracts irrespective of its nature and parties thereto²¹⁴ and it is stated that banker-customer relationship is essentially a contractual relationship and e-banking is a e-contracts for the provision banking products and services.

²¹¹ World Bank Group, cited above at note 192, p.35

²¹² Ibid

²¹³ See Article 14(4) of TCCPC

²¹⁴ Civil Code of the Empire of Ethiopia, 1960, Proclamation No. 165, Neg. Gaz., 9th year, No.2

Hence, the provisions of the general contract law have an implication on the fair treatment that an e-banking user has to get in dealing with the financial institution providing the service. Article 1738 sub-article 2 stipulates that models and forms of contracts prepared by one party shall be interpreted in the favor of the other party in case there is a dispute and this provision is significant to ensure the fairness of relationship in e-banking services and taking into consideration the bargaining power difference between the e-banking service provider and the user the terms and conditions of use shall be interpreted in favor of the service user to ensure it is fair and protect the interest of the service consumer. Moreover, article 1710 can also be used as a recourse mechanism to ensure the fairness of treatment of e-banking consumer. The e-banking consumer can request the invalidation of the contract if its terms and treatments are unconscionable.²¹⁵ To conclude, there are different laws and rules that are relevant in ensuring the fairness of the terms and business conduct of e-banking services providers and to further enhance the protection of the consumer the rules has to be compiled together and promulgated considering the intricacies of ensuring fairness in e-banking platforms.

iii. Data Protection and Privacy

Financial service providers collect different types of private information from and regarding their customers and given the potential for misuse of such information, it is indispensable that data collection be regulated to avoid the risk of harm to consumers.²¹⁶ Financial service providers may otherwise collect sensitive information and use it for unfit purposes that may harm consumers. Hence, reasons for ensuring data protection and privacy include; the sensitivity of the personal information held and used in financial services, the extensive information flows that take place in financial services, the increasing likelihood of information being received and held electronically with a corresponding increase in the risk of remote unauthorized access of such data, and the fact that privacy is internationally recognized as a fundamental human right deserving of protection.²¹⁷

Financial services providers shall be able to legally collect, retain, and use personal information with lawful and informed consent from the consumer or on some other legitimate basis such as

²¹⁵ See article 1710 of the Civil code of Ethiopia

²¹⁶ World Bank Group, cited above at note 192, p.45

²¹⁷ Ibid

when the provision of the specific financial product or service the consumer requested requires. The lawful collection of data has to be strictly connected to the purpose for which data are collected and financial service providers should be permitted to use the data only for those purposes. It is prohibited to disclose consumer information to third parties for unauthorized uses without the consumer's prior consent. It is critical that the information collected by financial service providers be kept safe, unaltered, and confidential. Security protection shall be put in place to protect against unauthorized access to a consumer's information and any threats or hazards to data security or integrity.

This feature of consumer protection is highly interconnected with the security of the e-banking system and it is very critical that the confidentiality of the consumer information is protected. Under Ethiopian law there is no specific law that governs the privacy issues generally and the privacy of e-banking consumer data in particular. However, by effectively managing the system security feature of the e-banking system the risks to consumer that emanates from violation of data protection and privacy can be solved. The understanding and believe at NBE is that by ensuring the security of the system the consumer protection concern can be addressed together and there is no initiatives being undertaken on this issue separately.²¹⁸ In fact, the better option is providing separate rules that govern the protection of consumer data and privacy for it provides clear line for the exercising of regulatory power and duties.

iv. Dispute Resolution and Recourse

Effective dispute resolution mechanisms, including at financial service provider level are a crucial part of financial consumer protection framework.²¹⁹ Consumers shall have access to an affordable, efficient, professionally qualified and adequately resourced mechanism for dispute resolution with effective enforcement capacity.²²⁰ Financial institutions shall have mechanisms to receive and handle complaints from their customers. The first step in resolving disputes between financial service users and providers are the complaint-handling mechanisms within financial service providers. Financial service providers shall be required to have written policies and effective mechanisms and systems for the proper handling and resolution of consumer

²¹⁸ Interview with Ato Gobana Warana, Banking Supervision Directorate Deputy Director at NBE, May 12, 2019

²¹⁹ Simret Zewdie Kebede, *Electronic Funds Transfer; And the Case for Consumer Protection in Ethiopia*, (2013, unpublished, thesis Oslo university), p.1, available at: <https://www.duo.uio>

²²⁰ Ibid

complaints. If a financial institution and a consumer cannot resolve a dispute they shall be able to resort to alternative dispute resolution systems such as financial ombudsmen or mediation services that assist the parties resolve their dispute or the parties shall resort to courts if necessary. Dispute resolutions through courts are costly and time-consuming and the alternative dispute resolution mechanisms are the viable options.

Under Ethiopian Law there is no comprehensive dispute resolution scheme for the financial service consumers including e-banking users. Under TCCPP the TCCP authority is empowered to establish a procedure for dispute resolution between the consumer and the trader by mutual agreement and negotiation and it is also empowered to establish judicial organ. However, due to the incompatibility of the general consumer protection and financial consumer protection concerns the rules under this law will not sufficiently address the dispute settlement concern in e-banking. The other pertinent rule, the mobile and agent bank directive stipulates that the financial institution shall record or register customer complaints, redress mechanism and address the complaints within a reasonable time frame that cannot exceed thirty working days from the date of reporting or lodging the complaint.²²¹The rules under this directive make it mandatory for a financial institution to handle customer complaint and address is speedily within thirty working days. However, it does not provide the next dispute settlement mechanism that the customer may pursue if he/she is not satisfied with the internal handling of the complaint. Hence, the rule under the directive is not comprehensive enough. The NPSP provides in relation to electronic fund transfers and stored value facilities that the service providers shall establish internal complaint handling procedures and shall advise users on the procedures for lodging complaints.²²² Moreover, it proclaims that all disputes related to the payment system shall be settled by mediation and if mediation fails to resolve the problem by arbitration which shall be final and binding.²²³ The approach under the NPSP is a better arrangement to effectively address consumer complaints and resolve disputes even if, issue may arise as the merit of making arbitration final dispute resolution method. The dispute resolution mechanism has two inter related aspects of handling of consumer complaints internally and the resolution of a dispute that cannot be addressed by complaint handling mechanisms. Hence, providing clear dispute settlement

²²¹ See article 12(11) and (12) of the Mobile and Agent Banking Directive

²²² See article 20(1) of the NPSP

²²³ See article 31 of the NPSP

procedures applicable to e-banking service delivery system is very critical and the NPSP provides good starting point with a slight modification.

3.3.5. E-banking and Market Competition

Competition in the financial sector is decisive for distributional, productive and dynamic efficiency as is any other sector.²²⁴ Competition in the financial sector matters for the efficiency of the production of financial services, the quality of financial products, and the degree of innovation in the sector. However, due to the special features of financial services unfettered competition is not the best option. In the financial sector excessive competition affects financial stability and the conducting of prudential regulatory policy. On the other hand, the degree of competition in the financial sector have an implications on the access of firms and households to financial services which affects overall economic growth.²²⁵ The financial sector regulatory policy goals include promoting both competition and stability. Competition encourages efficient and innovative financial services, while stability is essential to the systemic trust on which the sector depends.²²⁶

Due to differences in the degree of economic development the reasons for adoption of competition policy and laws varies in different jurisdiction. However, the often cited objectives a competition policy and laws are; create, maintain and promote effective competition by preventing abuse of economic power and anticompetitive private action; eliminate anticompetitive government intervention in the market that lessens competition and lead to inefficient use of resources and reduces consumer welfare; achieve economic efficiency and dynamism; and to enhance consumer welfare.²²⁷ There are other policy objectives that will be dictated by the country specific economic, social, political situations.

²²⁴ Claessens, Stijn, Competition in the Financial Sector: Overview of Competition Policies, (2009), IMF Working Papers Series, Vol.24, no.1, pp. 1-35, 2009. Available at SSRN: <https://ssrn.com/abstract=1366175>

²²⁵ Ibid

²²⁶ OECD, Competition and Financial Markets, Key findings, (2009), p.7 available at: www.oecd.org/competition/roundtables

²²⁷ Solomon, cited above at note 124, p. 79

The standard competition paradigm does not entirely fit to the banking sector due to market failures that are typical to the banking sector.²²⁸ Whether competition is good for the banking sector has been called into question for a long time and in a tightly regulated market, competition in the banking sector was limited and the preference was to deal with a concentrated banking sector and a collusive environment in a range of countries. The argument was competition narrows bank margins and increases incentives for risky behavior and destabilizes the system. Thus, restrictive policies are set up by regulators which include rate ceilings, activity limitations, and branching restrictions.²²⁹ As a result of this policy direction financial sector was exempted from competition policy and laws applicable to other sectors of the economy. However, with deregulation since 1970's in USA and Western Europe competition started to be favored with the belief that competition enhances efficiency, and financial liberalization. The liberalization and deregulation process increased competition in the banking sector from both inside and outside the industry.²³⁰ As a result of competitive pressure banks have expanded into new and risky lines of business and new locations which have resulted in excessive risk-taking, individual bank defaults, and crises occurred in various countries. The increase in competitive pressure has brought a trend of bank consolidation to increase the size of banks and gain market power and reap economies of scale.²³¹

As a result of technological development markets for financial services can increasingly be treated like other markets. Technology is reducing asymmetric information often a reason for treating financial services differently from other markets and financial products are becoming more homogeneous.²³² To reap the benefits of technological innovations competition has to flourish and uncompetitive structures avoided. Competition policy for financial services has thus become more feasible and more important.

Under Ethiopian law market competition in the financial sector including the e-banking system is regulated under the TCCPP and all the anti-competitive acts regulated under part two of the

²²⁸ Gamze Danisman, "Overview of Competition in the Banking Sector", International Journal of Economics, Commerce and Management United Kingdom Vol. VI, Issue 4, (2018), P.62 available at: <http://ijecm.co.uk>

²²⁹ Ibid, see also Solomon supra note 124 above p.79 and ff

²³⁰ Ibid

²³¹ Ibid

²³² Stijn Claessens/Thomas Glaessner and Daniela Klingebiel, "Electronic Finance: Reshaping the Financial Landscape around the World", p.3

proclamation is applicable to the financial sector in general including the e-banking system.²³³ The expansion of market competition in the financial sector including e-banking yields a positive result to the majority of Ethiopians who are excluded from access to formal banking services and for the attainment of the financial inclusion policy of the country. Hence, competition among e-banking service providers by offering innovative banking products and services is desirable. However, to fully benefit from the attributes of technological advancement the financial regulator has to enhance its regulatory capacity. The NBE is strict in its regulatory approach and does not easily permit the rolling out of new products and services with which it is not familiar.²³⁴ This approach greatly hampers innovation and competition among banks by rolling out innovative e-banking service delivery channels and it needs to be corrected. To restrictive regulatory approach hampers competition.

3.4. Supervision of Bank Technology Providers in Ethiopia

Financial services businesses throughout the world increasingly rely on third party service providers for operational support of technology based financial services.²³⁵ The primary drivers of outsourcing are cost reduction, operational flexibility and increased security and operational resilience. While operations can be outsourced, the risks and liabilities associated with those operations remain with the banks. By employing technology service provided by third parties financial institutions will benefit from access to products, technical expertise and efficiencies from economies of scale that they may not possess if the services were developed in-house.²³⁶

While the utilization of third party provided services generate a number of benefits to a financial services organization there are a number of risks associated with it which needs to be managed effectively. The risks involved include strategic, reputational, compliance, operational and other kind of risks associated with technology.²³⁷ Strategic risks may emanates from the engagement of third party in the activities which are inconsistent with the overall strategic goals of the regulated entity, failure to implement appropriate oversight of the outsource provider and

²³³ See part two of the TCCPC

²³⁴ Interview with Ato Getu Molla, supra note 175

²³⁵ Basel Committee, cited above at note 71, p.36

²³⁶ Ibid

²³⁷ BIS, "Outsourcing in Financial Services", The Joint forum Consultative Documents, Bank for International Settlements, (2004), p.11 available at: <https://www.bis.org/publ/joint12.htm>

inadequate expertise to oversee the service provider. Reputational risk may emanate from poor service from third party, inconsistent customer interaction with overall standards of the regulated entity and third party practices that deviates from the normal practices of regulated entity. Moreover, the third party provided service utilization also leads to compliance risks including non compliance with privacy standards, consumer and prudential laws and inadequacy of third party service provider to compliance and control and operational risk such as technology failure, inadequate financial capacity to fulfill obligations and/or provide remedies as well as, detect fraud or error.²³⁸ Hence, it is imperative that appropriate supervisory tools are put in place to effectively manage the risks that may arise from the use of third party provided services by financial institutions especially for the provision of e-banking products and services. Unless properly considered and managed the risks that arise from the third party provided services may expose the whole system to risks.

As a result of the growing usage of third party provided services by banks and other financial institutions two approaches to the monitoring and supervision of the risks posed by these third party services providers have developed by financial regulators.²³⁹ In the first regime, the bank supervisor has the statutory authority to directly supervise third-party service providers or activities provided by third-party service providers to banks. The supervisory power of the Saudi Arabian Monetary Authority, and the Federal Reserve, Federal Deposit Insurance Corporation and the Office of the Comptroller of the Currency in the United States of America are the examples of regulators following this supervisory approach.²⁴⁰ The second approach, which is most common among bank supervisors internationally, is to gain access to third parties via the contracts these parties have signed with supervised banks.²⁴¹ Nevertheless, irrespective of the regulatory regime employed, the important issue is that bank supervisors have to put in place mechanism to effectively supervise third-party service providers on a regular basis to avert possible risks that may arise there from.

Under Ethiopian law there is no regulatory framework which governs the services the third party providers to banks and other financial institutions. The financial institutions enter into different

²³⁸ Basel Committee, cited above at note 238, p.36

²³⁹ Ibid

²⁴⁰ Ibid

²⁴¹ Ibid

forms of arrangements such as profit sharing and hiring system to utilize the technology services offered by the third party-providers. The regulator NBE currently does not supervise the third party services providers apart from looking at the contracts the regulated institutions report to it.²⁴²The assumption of the NBE is that even requesting to inspect the contract concluded between the banking organization and the third party service provider separately from the report of the banks violates the confidentiality of the correspondence between the parties and there is no move to supervise the relationship.²⁴³

However, as stated above third part provision of technological services to banks has an impact on the risk exposure of the financial institutions and has to be closely supervised. In the Ethiopian context there is no move to supervise them and it is very critical that the risks they might pose assessed and managed. As the e-banking system expand and its share in the market increase, the financial institutions shall be required to set up comprehensive risks management rules to avert possible risks that may arise the outsourcing arrangement and the regulator NBE shall also consider possible risks that may face the financial sector from these arrangements and put in place supervisory mechanisms to manage it.

²⁴² Interview with Ato Getu Molla, note 175

²⁴³ Ibid

Chapter Four

Conclusions and Recommendations

4.1. Conclusions

The advancement of technology has changed and is changing the financial sector. It has greatly changed the actors in the financial sector and the financial service delivery mechanism. For centuries technological progress has been an important force in the transformation of finance and the technological advancement has an impact on all functions of finance including the making of payments, saving, borrowing, managing risks, and getting financial advice. Adopting these technologies has become the necessity of survival for the financial companies. Hence, e-banking is the byproduct of technological advancement and it involves the delivery of banking products and services through electronic means of different kinds.

E-banking system is transforming the banking and financial industry in terms of the nature of core products or services and the way banking services and products are packaged, proposed, delivered and consumed. Compared with traditional channels of offering banking services e-banking enables service providers to reach their customers through electronic channels and deliver their services. On the part of the customer e-banking enables customer to perform banking activities such as cash withdrawals, transfer funds, request balance inquiry, undertake electronic bill payment, download copies of bank statement, receive account alerts, security alerts and reminders and other services without the need to visit the bank institution. E-banking also benefits the economy by increasing efficiency of service delivery and help reach the underserved section of the society.

E-banking is an extension of the traditional banking services and it involves the delivery of banking products and services through electronic channels. Hence, the laws, policies, rules and principles of financial regulation are applicable to it. However, due to its salient features that differentiates it from the traditional banking service the regulatory rules and principles needs to be modified or new rules enacted to address the specific risks and issues that arise in relation to e-banking. The financial regulation laws and policies, telecommunication sector laws and policies, the national payment laws, the e-commerce regulatory frameworks and laws, financial inclusion strategy and specifically the mobile and agent banking services directives issued by the NBE are the relevant areas of laws in relation to the regulation of e-banking services in Ethiopia.

Even though, Ethiopia does not have a comprehensive law that regulates the e-banking system these areas of laws and policies touch upon different aspects of e-banking regulation and supervision.

In order to regulate the e-banking system the financial regulator applies the mobile and agent banking service directive which was issued to govern the provision of the mobile and agent banking. The adequacy of the mobile and agent banking service to regulate all e-banking service platforms is not practically tested and all the e-banking delivery platforms do not present similar regulatory issue and concerns. Hence, the regulatory framework needs to be reformed to accommodate the new developments in the e-banking sector and to address the regulatory issues and concerns different e-banking delivery channels pose and harness the opportunities the e-banking sector presents to the customers, the banking organizations and the economy as a whole.

The NBE employs strict regulatory approach to the e-banking system and does not permit the rolling out of e-banking products and services which it does not have prior knowledge. By its nature technological advancement changes rapidly and it poses challenge to the financial regulator to understand and put in place a regulatory framework in advance. E-banking system regulatory framework requires striking a balance between the stability of the system and the development of innovation. However, the regulatory approach the NBE is employing may ensure the stability of the system but it hampers innovation and opportunities that it may present. The financial regulator shall change its strict regulatory approach that hampers innovation and allow the expansion of e-banking system by putting in place proportional regulation of the risks the innovation may pose and enhance its regulatory capacity to exercise its regulatory duty.

The Ethiopian government shall undertake initiatives and reforms to enable the expansion of the e-commerce generally and e-banking services specifically. For the e-banking system to expand the regulatory framework shall be made enabling and the government and the financial regulator shall take leading role in reforming the regulatory framework and structure. Regulatory reforms in the areas of telecommunication and the role of telecom regulator in the e-banking system, the security of the e-banking system, consumer protection concern in the e-banking system, the need to enhance market competition in e-banking system, and the supervision of third party technology providers to financial institutions shall be considered to enable the expansion of e-banking services.

4.2. Recommendations

- The Ethiopia's e-banking system is basically tied to the incumbent banks and the role of the telecommunication sector is providing the necessary infrastructure for reliable and secure connectivity. Hence necessary reforms have to be undertaken to enhance the capacity of the telecommunications sector to support the financial sector by providing the necessary connectivity and further assume additional responsibility such as acting as mobile money operator to deepen the reach of the e-banking to the majority of the citizens.
- The regulatory framework in place to ensure the security of the e-banking system in Ethiopia is not sufficient to secure the system from the possible threats. There is no comprehensive security guideline applicable to all e-banking framework and the available rules lack the necessary flexibility to absorb the ever changing security challenge. Hence, the regulatory NBE shall set a security guideline applicable to all families of e-banking and that provides a framework for sound security practices, authorization practices, audit trail practice, standards on privacy of consumer information, continuity and contingency plans and revise and update it from time to time to cope with the ever changing security features of e-banking platforms and international development and the NBE shall enhance its regulatory capacity by employing capable IT professionals that have necessary competence to oversee the security issue in highly changing technological environment.
- For e-banking services to prosper and expand it is quite important that the e-commerce expands and the Ethiopian government shall anchor the development and expansion of e-commerce by putting in place the necessary laws and policies for the expansion of e-commerce in the country and by going itself electronic.
- Consumer protection issues are very critical to the e-banking system development. The financial services consumer generally and e-banking consumers protection state under Ethiopian law is haphazard. There are no consumer protections rules tailored to the need of financial consumer and no institutional set up to handle consumer protection issues. Hence, the Ethiopian government shall undertake reforms in the area of financial service consumer protection by laying down the rules that address the need of the financial consumer and set institutional structure to oversee the enforcement of the rules.

Specifically the following issues have to be addressed in the financial service consumer's protection framework.

1. The disclosure and transparency rules in the e-banking service delivery are not comprehensive. Hence, the dispersed disclosure and transparency rules shall be harmonized and promulgated to address specifically the concern in this regard.
 2. The rules on fairness in the terms and business conduct are one of the important aspects of consumer protection and under Ethiopian law there is no comprehensive law that governs it. The fairness in terms and conduct of business in e-banking service delivery has to be enacted to address consumer protection concerns.
 3. The rules on dispute settlement and recourse is an essential element of consumer protection and under Ethiopian law there is no comprehensive law that governs dispute settlement and recourse in relation to e-banking. Thus to further enhance the protection of e-banking consumers the rules on dispute settlement in e-banking service shall be enacted and provide explicit process for dispute settlement.
 4. The general consumer protection authority has no necessary capability to oversee the enforcement of financial service consumer protection and new institutional set up shall be established or the power delegated to the financial regulator.
- The expansion and development of e-banking have enabled financial institutions to compete innovatively. The regulatory approach of the NBE is to deny permission to products and services that it thinks is beyond the established regulatory rules hampers innovative competition among banks. Hence, it is mandatory that the NBE enhance its regulatory capacity and allow financial institutions compete by rolling out new technology aided products and services.
 - Financial institutions rely on third party provided technology services and it is imperatives that the regulatory organs consider the risks that may emanate from third party service providers. The NBE does not supervise the third party service providers and as the e-banking system grows and expands the risks that arise from third party service provision may damage the e-banking system and financial sector and NBE shall consider and put in place appropriate supervision.

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